Strengthening resilience
to food and nutrition insecurity
in the Sahel and Western Africa

Knowledge Share Fair
Ouagadougou, Burkina Faso
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Good Practices Booklet
Acronyms

ACF: Action contre la faim (Action Against Hunger)
AEC: Agences d’exécution communautaires (Community Implementing Agencies)
AFD: Agence française de développement (French Development Agency)
AGIR: Global Alliance for Resilience Initiative
ANR: Assisted Natural Regeneration
APOR: Action pour la promotion des organisations rurales (Action for the Promotion of Rural Organizations)
ARC: African Risk Capacity
AREN: Association pour la Redynamisation de l’Élevage au Niger (Association for the Revitalisation of Livestock in Niger)
CBM: Christoffel-Blindenmission
CESAO-PRN: Centre d’Études, d’Expérimentations Économiques et Sociales de l’Afrique de l’Ouest - Pôle Régional Niger (Western African Centre for Experimental, Economic and Social Studies - Regional Pole Niger)
CH: Cadre Harmonisé
CILSS: Permanent Interstate Committee for Drought Control in the Sahel
CLM: Cellule de Lutte contre la Malnutrition (Fight Against Malnutrition Unit)
DMT: Metric ton of Dry Matter
ECOWAS: Economic Community of Western African States
FAO: Food and Agriculture Organization of the United Nations
FCFA: Francs de la Communauté Financière d’Afrique (Francs of the African Financial Community)
FEWSNET: Famine Early Warning Systems Network
FFS: Farmer Field Schools
FS: Food security
GSU/IPC: IPC Global Support Unit
HKI: Helen Keller International
ICRISAT: Institut de recherche en sciences appliquées et technologies / Département de technologie alimentaire (International Crops Research Institute for the Semi-Arid Tropics)
IFPRI: International Food Policy Research Institute
IGAD: Intergovernmental Authority on Development
INERA: Institut de l’Environnement et de Recherches Agricoles (Environment and Agricultural Research Institute)
**IPC:** Integrated Food Security Phase Classification

**IRSAT/DAT:** Institute of Applied Sciences and Technology / Department of Food Technology

**IYCF:** Infant and Young Child Feeding

**JRC/EC:** Joint Research Centre / European Commission

**KOKARI:** Rural Credit Intermediation Service

**NCBA CLUSA:** National Cooperative Business Association Cooperative League of the USA

**NGO:** Non-governmental organization

**NTFP:** Non Timber Forest Products

**PASEL:** Programme d’appui au secteur de l’élevage - Coopération Suisse (Programme of support for livestock production - Swiss Agency for Development and Cooperation)

**PREGEC/RPCA:** Dispositif régional de prévention et de gestion des crises au Sahel et en Afrique de l’Ouest (Regional Information System for Food Crisis Prevention and Management in the Sahel and Western Africa/Food Crisis Prevention Network)

**RIMA:** Resilience Index Measurement and Analysis

**UEMOA:** Western African Economic and Monetary Union

**UNAN:** Union Nationale des Aveugles du Niger (Niger Blind Union)

**UNICEF:** United Nations Children’s Fund

**USAID:** United States Agency for International Development

**USD:** US dollars

**VDN:** Viande Déshydratée du Niger (Dehydrated Meat from Niger)

**VSF:** Vétérinaires Sans Frontière (Veterinarians without Borders)

**WASH:** Water, Sanitation and Hygiene Promotion

**WFP:** World Food Programme

**WSA:** Water and Sanitation for Africa

**WSC:** Water and Soil Conservation
Preface

When the tam-tam changes rhythm, the dancer must also change step.
Haoussa proverb

This booklet is the result of close collaboration between CILSS, IGAD, FAO and all the partners who contributed to the success of the Knowledge Share Fair in Ouagadougou, and particularly to the preparation of this collection. These are: Vétérinaires Sans Frontières Belgium (VSF-Belgique), Helen Keller International (HKI), NGO Karkara (Niger), the Association pour la Redynamisation de l’Elevage au Niger (AREN), the Pôle Régional Niger du Centre d’Études, d’Expérimentations, Economiques et Sociales de l’Afrique de l’Ouest – (CESAO-PRN), the Cooperative League of the USA (NCBA CLUSA) and the Cellule de Lutte contre la Malnutrition (CLM) of Senegal.

In the Sahel, as in the Horn of Africa, the food and nutritional status of men, women and children, who are threatened by multifaceted and recurrent crises, remains a major concern. Against this backdrop, strengthening the resilience of vulnerable households is an imperative, as reflected in the strategic frameworks of CILSS, IGAD and FAO.

Mindful of this situation, in 2012 the regional organizations of the Sahel and Western Africa, with support from their technical and financial partners, set up the Global Alliance for Resilience Initiative (AGIR), with the aim of pooling the efforts of all players towards achieving the Zero Hunger objective within twenty years.

The Malabo Declaration in 2014 confirmed this dynamic, with the commitment of heads of state and governments to strengthen the resilience of African livelihoods and production systems facing the challenge of climate variations and other risks.

This booklet is an excellent resource for sharing and exchanging good practices and lessons learned to support the resilience of vulnerable communities and improve risk governance, information on food and nutrition security, practices to reduce vulnerability and emergency responses.

We would like to thank all the individuals and organizations who have contributed to the preparation of this publication, in particular Mahalmoudou Hamadoun (CILSS), Dramane Coulibaly (FAO), Nourou Macki Tall (FAO), Etienne Juvanon du Vachat (FAO) and J. Yennenga Kompaore for coordination and proofreading and Sophie Treinen (FAO), Frédérique Matras (FAO), Maud Oustry (FAO), Giulia Ramadan El Sayed (FAO) and Aldo Federico Moro (FAO) for their commitment, patience and care in producing this publication.

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Introduction

Within the Global Alliance for Resilience Initiative (AGIR), resilience is defined as “the capacity of vulnerable households, families, communities and systems to face uncertainty and the risk of shocks, to withstand and respond effectively to shocks, as well as to recover and adapt in a sustainable manner”.

FAO defines resilience as the ability to prevent disasters and crises as well as to anticipate, absorb, accommodate or recover from them in a timely, efficient and sustainable manner. This includes protecting, restoring and improving livelihoods systems in the face of threats that impact agriculture, nutrition, food security and food safety.

Context

In the Sahel, around 65 percent of the active population works in the agriculture sector and their livelihoods are therefore affected by climate change, markets and environmental factors. More than half of these are women. Recurring crises pose real concerns for the achievement of sustainable food and nutrition security in the region.

The root causes of vulnerability to food insecurity and malnutrition are complex and multidimensional. They are linked to a range of closely related factors, such as poverty, health, hygiene, access to basic social services, dietary behaviour, socio-cultural norms, weak production levels, access to markets and the inadequacy of some public policies, as well as to climate variations and other frequent shocks, which result in large numbers of people being plunged into an almost permanent state of fragility.

To address these recurrent crises, analytical tools to assess the situation and identify vulnerable populations have been set in place in the region and refined in recent years (including first and foremost the Cadre Harmonisé). In addition, innovative practices have been developed, to support risk reduction, climate change adaptation, the fight against malnutrition and social protection (particularly through approaches based on social safety nets and cash transfers).

Among other achievements, the Knowledge Share Fair organized by CILSS, IGAD, FAO and their partners in 2013, in Ouagadougou, Burkina Faso, offered an opportunity for national and international actors to exchange experiences of these food related practices.

This booklet presents eleven good practices that were developed during the Knowledge Share Fair, with the aim of promoting their dissemination and replication at regional and international level.

1 Regional roadmap of the Global Alliance for Resilience Initiative, see https://www.oecd.org/swac/publications/AGIR%20roadmap_EN_FINAL.pdf

The Ouagadougou Knowledge Share Fair

A spirit of exchange and experience sharing

In a spirit of exchange and experience sharing, aimed at strengthening the resilience of communities in the Sahel and Western Africa, CILSS and FAO, in collaboration with IGAD – within the policy framework of ECOWAS and UEMOA, and with support from CILSS’ longstanding technical and financial partners – organized a Knowledge Share Fair in Ouagadougou, Burkina Faso, from 5-7 November 2013, with the theme: “Strengthening resilience to food and nutrition insecurity in the Sahel and Western Africa”.

The aim of the fair was to strengthen the knowledge of institutions and participants about measures and practices that can help to improve the resilience of communities in the Sahel and Western Africa. It offered an opportunity to share knowledge on programmes, but also on the most appropriate policies and strategies for the two subregions. More specifically, it provided a space for exchanging experiences and dialogue between stakeholders in the sector to promote: (i) the mutual learning process; (ii) the strengthening of existing networks and partnerships; (iii) the scaling up of good practices at national and subregional levels.

Some 250 participants, of whom nearly 16 percent were women drawn from 14 member countries of CILSS, ECOWAS and IGAD, took part in this important event, together with representatives from intergovernmental organizations (ECOWAS, UEMOA), technical and financial partners (bi- and multilateral cooperation institutions and agencies from the United Nations system), as well as civil society organizations and actors from the private sector.

The exchanges between participants were organized around five themes:

1. Sustainable natural resource management and climate change;
2. Livestock, with particular focus on pastoralism;
3. Reduction of food and nutrition insecurity;
4. Management of risks, threats and crises;
5. Social protection.

For each theme, good practices were identified, presented and discussed during workshops and panel sessions staged during the Share Fair. A total of 11 good practices were selected to be presented as fact sheets in this booklet.

Results and recommendations by theme

Sustainable natural resource management and climate change

The good practices developed as part of this theme include: the production and dissemination of information on climate change and sustainable land management to support decision-making; use of the Delfino plough, aquatic and floodplain recession forage crops; living hedges to intensify production in the Sahel; harvesting forest resources and developing non-timber forest products; Nutritious gardens based on moringa and baobab and assisted natural regeneration and rehabilitation of degraded land in the Sahel.
These good practices are generally low-carbon technologies and lead to improvements in communities’ resilience to food insecurity. However, some of the techniques, whose implementation costs are extremely high – for example use of the Delfino plough – require various types of support, including those provided by technical and financial partners. Land tenure security and the adoption of technologies by communities are important issues to take into account, so as to ensure that investments are sustainable. Governments and technical and financial partners (TFP) are encouraged to increase their investments to support local communities in scaling up good practices.

**Livestock, with particular focus on pastoralism**

Pastoral livestock keeping plays a major role in the economies of the Sahel countries, where it makes a significant contribution to the food and nutrition security of local communities, as well as to the fight against poverty.

Particular focus of the good practices is on: pasture management and forage production; strategic destocking and emergency destocking; information systems on pastoralism.

Certain key points have been highlighted by different stakeholders. These include: adaptation of pastoralism to the physical environment experiencing climate change; the need to develop pastoral policies that take into account drivers of subregional integration, such as shared resources; the challenge of fragmented livestock regulation in the subregion; sound management and rehabilitation of pastureland in arid areas, linked to greater accountability for communities; vulnerability in pastoral environments; healthcare issues, rangeland management and the setting up of legal frameworks to oversee pastoral mobility in the Western African region.

**Reduction of food and nutrition insecurity**

In an effort to address food and nutrition insecurity, the countries of the Sahel and Western Africa have adopted various strategies and set in place prevention and management mechanisms.

Several good practices have been developed in this respect, in particular: Farmer Field Schools (FFS); warrantage or inventory credit; the ‘caisses de résilience’ approach; survival gardens; use of improved seed.

Community adoption of these good practices will depend on strengthening technical, organizational and financial capacities. There is also a need to address specific constraints, such as: the governance of community and producer organizations, inadequate financial and material resources, challenges in accessing land and markets and poor infrastructure (for storage, processing, marketing).

Strengthening resilience will require greater pooling of efforts, as well as the promotion of group sureties, advocacy, the professionalization of value chain actors and the taking into account of social, technical and financial aspects.
Management of risks, threats and crises

The Western African region is facing the effects of climate change and variability, and is under constant threat from several types of risk: risk of conflict, health risks, risk of natural disaster, risk of food and nutrition crises, political risk, etc. These crises and disasters affect people and property and exacerbate the vulnerability of communities. Good governance of risks and disasters involves making informed decisions and implementing them quickly and efficiently. It encompasses not just the development and application of regulatory frameworks to minimize risks, but also sizeable public and private investments to achieve that.

The good practices that can help to do achieve this are, in particular: use of the Cadre Harmonisé (CH), measuring and analysing resilience, indicators of resilience, the regional information system for Food Crisis Prevention and Management (PREGEC), and index-based insurance for crisis and disaster management, such as African Risk Capacity (ARC).

However, questions remain about the setting up and especially the adoption of these good practices, such as sustainable funding for the Cadre Harmonisé by governments and the problematic relationship between the duration of short-term projects (four to five years) and the longer-term expected impacts (fifteen to twenty years).
Social protection

In terms of social protection, there have been a variety of experiences at local, national and even regional level, in particular: use of cash transfers for agricultural development and child focused nutrition; cash transfers, cash-for work or food-for-work; agricultural input and seed trade fairs; livestock destocking and restocking; a common understanding of the links and transition process between humanitarian aid and development; an analysis of the links between malnutrition and food security; a better understanding of the objectives and delivery mechanisms of the Global Alliance for Resilience Initiative (AGIR).

Social protection is a key feature of strengthening resilience. Indeed, it generates multiplier effects for vulnerable communities in a number of social sectors, such as health, education and nutrition, as well as in economic and productive sectors (agricultural production, jobs, etc.). Beneficial impacts on gender equality and limiting the rural exodus have also been observed.

Strong advocacy is required for additional investments in social protection by governments and technical and financial partners, given the effectiveness of the approach and the high level of return on investment. Political dialogue needs to be set in place so as to foster the inclusion of social protection in programmes seeking to strengthen resilience. In addition, money transfer mechanisms need to be modernized and the process of identifying vulnerable populations must be improved.
Governance and early warning systems
RIMA-II Resilience Index Measurement and Analysis (FAO)

RIMA-II, an improved methodology to analyse the resilience of households and identify their priority needs

→ **Context**

Since 2008, the Food and Agriculture Organization of the United Nations (FAO) has been at the forefront of efforts to measure the resilience capacity of people to food insecurity and the effectiveness of resilience strengthening interventions. Within this framework, FAO has pioneered the development and the use of the Resilience Index Measurement and Analysis (RIMA).

RIMA is an innovative quantitative approach that measures household resilience to food insecurity. It aims to explain why and how some households cope with shocks and stressors better than others.

The first version of RIMA has been technically improved based on its application in ten countries. As a result, the new RIMA-II methodology provides better support for more effectively designing, delivering, monitoring and evaluating assistance to populations in need, based on what they need most.

→ **Objective**

RIMA-II answers questions such as: Who is most in need? Where should investment focus? Which dimensions of resilience need to be supported? To what extent have interventions increased or decreased target populations’ resilience?

Overall, RIMA-II is a rigorous methodology that contributes to a framework for humanitarian and long-term development initiatives to build food secure and resilient livelihoods.

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* This fact sheet has been revised since the Ouagadougou knowledge share fair to reflect the new index model RIMA-II

**Geographical coverage** → RIMA Analyses have been conducted in Burkina Faso, Kenya, Malawi, Mali, Niger, Nigeria, Somalia, Uganda, Sudan, and South Sudan.

RIMA analyses are underway in Chad, Ethiopia, Lesotho, Mauritania, Senegal and West Bank and Gaza Strip.

**Partners** → IFAD, UNDP, UNICEF, IFPRI, WFP and the World Bank as well as CISS, EU, IGAD and universities

**Target groups** → Local communities, policy makers
**Methodological approach**

To measure resilience, ‘household’ is the appropriate unit of analysis of the RIMA methodology. The reason for this is that households are where important decisions are made and they are affected by both positive and negative effects of shocks.

Four major **pillars** contribute to the measurement of households’ resilience capacity:

1. **Adaptive Capacity (AC):** households’ ability to adapt to the changing environment and develop new livelihoods strategies.
2. **Social Safety Nets (SSN):** households’ ability to receive informal (relatives and friends) and formal (government) transfer assistance as well as timely and reliable assistance provided by international agencies, charities and Non-governmental Organizations.
3. **Productive and non-productive Assets (AST):** productive assets are the key elements of a livelihood, enabling households to produce consumable or tradable goods. Examples of indicators include land, livestock and durables. Context-specific sets of productive assets which are able to determine the creation of the household income are evaluated. Other tangible non-productive assets such as house, vehicle, and household amenities reflect living standards and wealth of a household.
4. **Access to Basic Services (ABS):** households’ ability to meet basic needs and access effective use of basic services (e.g. access to schools, health facilities, infrastructures and markets).

The **conceptual framework** for resilience measurement captures all possible pathways to well-being in the face of shocks. The figure below demonstrates what happens to a household well-being when a shock occurs and resilience mechanisms are activated.

When a shock occurs, a series of coping strategies is activated, principally consumption smoothing, assets smoothing and adoption of new livelihood strategies. Household resilience contributes to these absorptive, coping and transformative capacities in an attempt to return back to the previous state of well-being. This can result (over the long-term) in an increase or decrease in Y. Any change in Y has an effect on resilience capacity and, consequently, can limit future capacity to react to.

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**How shocks fit into RIMA-II?**

Households can be affected by several types of shocks that range from relatively minor to very severe and recurrent ones. For this reason RIMA-II runs regression analyses that take into account:

- **idiosyncratic shocks**, such as livestock death, job loss and illness of a household member. These shocks are all directly reported by households in surveys;
- **covariate shocks**, which in turn are divided into:
  - **climate shocks**, such as droughts, floods, temperature variations, rainfalls and other natural hazards;
  - **conflict shocks**, such as fightings, murders and public disorders.
RIMA-II measures resilience both directly (descriptive approach) and indirectly (inferential approach).

The descriptive measure provides a description on household resilience capacity and a effective baseline and valuable policy analysis tool to inform funding and policy decisions of governments, international organizations, resource partners and civil society, as it targets and ranks households from most to least resilient. This direct approach measures the:

- **The Resilience Capacity Index – RCI**: estimates households’ capacity to cope with shocks and stressors and avoid long-term damages. The index ranges from 0 to 100 percent and measures the household recovery capacity.
- **The Resilience Structure Matrix – RSM**: explains how much each pillar contributes in determining the resilience capacity. The RSM graph illustrates how the resilience capacity was structured in a specific place and point in time.

The Resilience Info Pack is composed of the three sets of RIMA-II measures: the descriptive measure (RCI and RSM) and inferential measure (the main resilience determinants that are represented by the three most important variables that determine household capacity for recovery). (example of Uganda here). The Resilience Info Pack can be presented as a stand-alone informative package.

The casual measure evaluates resilience indirectly and provides evidence on the main determinants of households’ resilience capacity. It can be adopted as a predictor tool for interventions that strengthen resilience to food insecurity. It provides new depth and breadth to resilience analysis and supports decision makers and other stakeholders to better understand the dynamics of positive trends in resilience and thus develop strategies that will yield positive results. RIMA-II estimates the impact of shocks on resilience capacity using data collected through satellite images. The use of spatial technologies allows to objectively find causal relationships between shocks and resilience capacity or food security.
Impact

Resilience analyses conducted with RIMA-II aim at informing policy and decision making processes by:

- serving as a baseline for **evaluating the impact of resilience strengthening programmes**;
- assessing the resilience capacity over the years, thus **providing helpful guidance in planning future interventions**; and
- reviewing resilience policies to **measure their actual impacts**.

By identifying the specific factors that promote the resilience of households, RIMA provides policymakers with clear indications to target their actions and interventions.

For example, the resilience analysis in the Palestinian territories shows that there is a big difference in how households headed by women and those headed by men cope with shocks. Women have fewer assets and less access to different sources of income than men. Thus, households headed by women rely heavily on public services and social safety nets. Policies that reduce safety nets and public services can have further negative impacts on women and their families.

Sustainability

Making a difference through partnerships

Partnerships are a key component to ensure sustainability of FAO’s strategy to promote, develop and implement RIMA-II at global, regional and country levels. Partnerships are essential to:

- guarantee the buy-in of government;
- help capacity building at country level;
- strengthen RIMA’s quality by receiving inputs and comments from high level partners;
- work in strict collaboration with National Bureau of Statistics.

In particular, FAO works in collaboration with international organizations (e.g. International Fund for Agricultural Development [IFAD], United Nations Development Programme [UNDP], United Nations Children’s Fund [UNICEF], World Food Programme [WFP], International Food Policy Research Institute [IFPRI] and the World Bank), regional bodies (e.g. European Union [EU], Intergovernmental Authority on Development [IGAD] and Permanent Interstate Committee for Drought Control in the Sahel [CILSS]), and universities (e.g. Cornell University, Tulane University, and Tufts University).
Since the end of civil war in the 1980s, Uganda has enjoyed peace with relative stability and prosperity. However, food security remains a problem in many parts of the country. To fully understand the causes of food insecurity, a RIMA-II analysis was conducted using a rotating panel dataset during 2009-2012. The results of the analysis indicated that animal loss and climate variations were the most commonly endured shocks and the most common coping strategies based on savings, family support or a change in eating habits.

RIMA-II analysis also showed that the most appropriate interventions to ensure a rapid recovery from a food security decline are to provide access to agricultural assets and infrastructures as well as to reduce distance to markets.

For more information

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RIMA-II (webinar)
Cadre Harmonisé for the analysis of vulnerability (CILSS)

Consolidating comprehensive analyses of food and nutrition security to support decision-making

→ **Context**

The Cadre Harmonisé (‘Harmonized Framework’) for the analysis and identification of areas at risk and vulnerable groups in the Sahel, more commonly known as the Cadre Harmonisé, was developed by the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and its partners in the early years of the 21st century. Refined over the years, the Cadre Harmonisé is a set of tools and procedures to classify the nature and severity of current and projected food and nutrition insecurity. New indicators and methods of classification and mapping have been added, mainly as a result of tools and procedures made available by the IPC (Integrated Food Security Phase Classification).

The creation of the Cadre Harmonisé responds to a need to harmonize methodologies and systems for mapping vulnerability to food and nutrition insecurity, which may be different from one country to another in the region. This is a regional tool that offers a common language for the consensual and inclusive analysis of a country’s food and nutrition security. It aims to inform decision-makers and guide action and interventions within the region. The analysis is conducted simultaneously in all countries, ensuring comparability of results in time and space.

→ **Governance and reach**

The Cadre Harmonisé process is managed by two bodies 1) a steering committee headed by CILSS, which brings together ECOWAS, UEMOA and technical and financial partners at regional level 2) The Cadre Harmonisé is developed by a Regional Technical Committee chaired by FEWS NET and involving a number of stakeholders, particularly regional partners WFP, FAO, UNICEF, ACF, Oxfam, Save the Children and international ones GSU/IPC and JRC/EU. As part of a strategy to strengthen partnerships, CILSS has been a member of the IPC Global Steering Committee since 2012.

At regional level, the Cadre Harmonisé is emerging as a harmonized tool for presenting information on food security to regional fora, in particular to the Réseau de prévention des crises au Sahel et en Afrique de l’Ouest (PREGEC/RPCA) to support decision-making and guide planning for interventions and programmes.
Why the Cadre Harmonisé?

The usefulness of the Cadre Harmonisé lies in its capacity to enable a greater comparability of results in space and time, as well as conducting a regional synthesis and a comprehensive analysis of the region. It is distinguished by analytical rigour, transparency and reliability of evidence and strategic effectiveness in terms of decision-making and creating a link between information and action. It measures acute or cyclical food and nutrition security.

In addition, the Cadre Harmonisé has been chosen by ECOWAS as a harmonized tool for analysing food and nutrition security in the Sahel and Western Africa (17 countries), as well as an official tool to foster mobilization of the regional food security reserve. The Cadre Harmonisé analysis is based on examining four indicators of food security (food consumption, nutritional status, livelihood development and mortality) that are linked to contributory factors, which in addition to factors of vulnerability, are established from evidence of the extent of food security. Such evidence may be the results of agricultural production, pasture condition, developments in prices of foodstuffs, cash crops, livestock, etc. that have an impact on one or more results of food security.

Methodological approach

The Cadre Harmonisé does not collect data, but relies on existing national systems. The steps of the process are as follows:

**Step 1: Inventory of evidence** according to elements of food and nutrition security. This means having access to all the data that supports analyses in the inventory of evidence, especially the source, period of data collection and a brief description of the methodology.

**Step 2: Analysis of the evidence and reliability score.** This involves assessing the key evidence, identifying its level of representativeness and allocating a reliability score. The analysis of outcome indicators is based on use of the reference table and should lead to conclusions, identifying the phase of each element of the food and nutrition security result (food consumption, nutritional status, livelihood change and mortality). Also considered are the contributory factors (hazards and vulnerability, food availability, access, utilization and stability) and their impact on outcomes for the current situation. The evidence is used to formulate hypotheses for the projected situation and the process of analysis is also conducted by validating the knowledge of expert analysts.

**Step 3: Synthesis and classification of the current and projected situation.** This involves charting on the same table the collective findings regarding the outcome indicators and contributory factors and constructing the convergence of evidence to reach a conclusion in a consensual manner on the classification of the area. At this level, the process of analysis is assessed by attributing confidence level of in the analysis, which depends on the size of the indicators available and their degree of reliability.

**Step 4: Population estimate.** The estimate is made depending on the phase (phase 1, 2, 3, 4 or 5). The process is based on the rule of 20% and uses reliable evidence applied during the construction of convergence of evidence for the classification.

**Step 5: Report and notification of results.** The map is informative, but it must undergo further verification. A report on the principal conclusions of the analysis should be drawn up and a fact sheet summarizing results generated, to produce better communication for decision-makers.
→ **Impacts**

The impacts of the Cadre Harmonisé can be observed at various levels:

- A greater presence at national workshops and in regional bodies;
- Recognition of the importance of consensus and the convergence of evidence;
- Calls for assistance to internalize the process within countries;
- Possibility of integrating and linking the Cadre Harmonisé process with the new early warning system under way in Chad;
- Integration of the Cadre Harmonisé in annual sequences of analysis in Niger and Burkina Faso.

→ **Sustainability and replicability**

To ensure that the Cadre Harmonisé tool can be replicated, and that it is sustainable, it is important to strengthen national information systems: collection infrastructure, training in collection tools, data processing and analysis and formalizing national analysis units. It is also crucial to implement a strategy for advocacy of decision-makers.

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**Operational system for the Cadre Harmonisé**

At operational level, each country has a national analysis unit for the Cadre Harmonisé within its early warning system. These units coordinate implementation of the Cadre Harmonisé: they are tasked with data collection and the entire analysis process.

At regional level, regional experts in the Cadre Harmonisé’s technical committee, including CILSS, FEWSNET, FAO and WFP, offer methodological support to facilitate the holding of workshops and ensuring the quality of implementation of the analysis process.

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**For more information**

*Permanent Interstate Committee for Drought Control in the Sahel (CILSS)*

[www.cilss.bf/](http://www.cilss.bf/)

*Manuel du Cadre Harmonisé, August 2014, CILSS*

[http://www.agrhymet.ne/PDF/Manuel%20CH_version%20finale.pdf](http://www.agrhymet.ne/PDF/Manuel%20CH_version%20finale.pdf)

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Risk prevention and vulnerability reduction
Rehabilitation of degraded land in the Sahel and assisted natural regeneration in Niger (NCBA CLUSA)

Restoring degraded and abandoned land through strong involvement of women

Context

Launched in 2010 with funding from USAID, the ARZIKI Niger Food Security Project has been developed by NCBA CLUSA (National Cooperative Business Association Cooperative League of the USA), to help some 190,000 vulnerable people in 8 target municipalities escape from chronic food insecurity, exacerbated by environmental degradation and climate variation.

Taking account of certain key findings in the field that reveal significant and extensive environmental degradation, the ARZIKI project has introduced an “environment and adaptation to climate change” component to its extension phase (2012 – 2014).

As part of its activities to restore degraded land and introduce assisted natural regeneration, the project has tested the creation and use of small groups of enterprises headed by producers, as well as the use of performance contracts for which payment is made on the basis of results achieved, especially for women.

Concept

In order to help repair damage caused to the environment and increase communities’ resilience, there is an urgent need to strengthen capacities, as well as mechanisms that guarantee rigour and quality. This approach brings together biological and mechanical initiatives and the application of resource management tools, which are entirely planned and implemented by local communities, with support from the government and potential partners.

Geographical coverage → Niger: region of Tillabéry (department of Filingué and Baleyara) and region of Tahoua (department of Bagaroua and Illéla)

Partners → Producer organizations, women’s groups, land commissions, decentralized state technical services (Agriculture, Livestock, Environment), authorities (prefects, mayors, traditional chiefs), primary schools, consortiums of local and international NGOs (APOR, ICRISAT, KOKARI, Sheladia Associates, EAA, with NCBA CLUSA as lead partner), private sector.

Financing → USAID

Target groups → About 400,000 vulnerable people, distributed throughout 46,000 households and 437 villages where interventions are carried out under the ARZIKI project, with more than 1,300 farmers’ associations identified, 60% of whose members are women

Nutrition and gender → Rehabilitating degraded land contributes to improved nutrition and women’s empowerment. The diversity of cultivated crops (moringa, sorrel, okra, senna, cabbage, lettuce, pigeon pea), of which 30 to 60% are for own consumption, contributes to household food and nutrition security. In addition, the sale of a share of production enables women to generate their own income, be more independent and participate more fully in household decision-making.
**What is assisted natural regeneration?**

Assisted natural regeneration (ANR) involves the careful selection of traditional woody species (nitrogen-fixing legumes, trees offering subsistence or other useful products: fuelwood, lumber, medicinal plants, etc.), paying special attention to size. In some areas, forest nurseries are added to supplement local natural plants. These supplementary forest nurseries are more costly, and their management requires a certain level of specialization, resulting in the setting up of technical training for village nursery committees.

Assisted natural regeneration is often coupled with rehabilitation of degraded land, using techniques for Water and Soil Conservation (WSC), such as zaï/tassa, terracing, half-moon ditches, living hedges and stone barriers, which reduce run-off and improve the infiltration of rainwater in soil. When combined with other methods, such as intercropping, use of compost, good storage, manure management and application, fertilizer microdosing and mulching, these techniques have helped to improve crop yields and adaptation strategies.

→ Methodological approach

The strategy of the ARZIKI project is based on technology transfer, strengthening individual and collective capacities and the responsible mobilization of community-based organizations.

The project has placed special focus on performance-based payment mechanisms, respect for quality standards in work undertaken and use of quality control records. Technicians have been trained to use these quality control checklists, which set out the standards and list of items to be checked on delivery of work, before then proceeding to payment for the workers. Payment controls are also conducted so ensure that people who have done work have actually been paid.

**Women are the main executors of performance-based payment initiatives.** In particular, they have learned to plant contour lines and build stone barriers on slopes of 0 to 3%. Men have been hired to build larger structures – terraced walls, stone borders – on slopes of 6 to 35%.

Men and women have also received practical training in building dams using dry stone or gabion techniques. The project activities are conducted through:

**Biological initiatives:**
- Training farmers’ associations in the practice of assisted natural regeneration;
- Training producers to use drought tolerant species, with high market value and adapted to the socio-environmental conditions of the intervention area.

**Mechanical initiatives:**
- Work carried out by producers to rehabilitate undeveloped areas and/or improve water infiltration for arable land. Simple and easily applied techniques (planting contours, building stone barriers, half-moon ditches and tassa pits);
- Rehabilitation and development of uncultivated land;
- Strengthening producers’ capacities in these technologies.
Developing tools for natural resource management:

• Developing and implementing plans of action for rational use of natural resources;
• Supporting women on sites where stone barriers are being built and bioreclamation of degraded land is being conducted for landless women, with the aim of obtaining land titles and securing them from expropriation;
• Organization of a national workshop to raise awareness of village facilitators and farmers’ association officials on the effects of climate change;
• Introduction to environmental education in schools.

Complementary actions: to increase yields and revenues and reduce pressure on resources.

→ Impacts

Impacts can be observed at different levels:

• The adoption by beneficiaries of biological and mechanical initiatives;
• Keen interest by producers in adapted seeds and plants;
• Access for women to degraded lands, which they restore and cultivate;
• Satisfaction, increased revenues and the start of empowerment for vulnerable women;
• Good cost-effectiveness for performance-based payment mechanisms compared with other payment for work systems;
• The introduction of quality control for all outputs;
• Increased productivity due to work completed;
• Greater awareness of climate change by men and women producers;
• Effective collaboration with farmers’ associations, environment departmental services, land commissions, local authorities, etc.;
• Team spirit and increased capacities of farmers’ associations;
• Scaling up of actions undertaken to develop land abandoned for many years;
• Securing land tenure of sites, ensuring sustainability for initiatives undertaken;
• The creation of jobs for groups of women and young people, through contracts for the provision of services relating to climate change adaptation (plant grafting, nursery working, making stone barriers according to quality standards, contour lines).

→ Replicability and upscaling

Factors that may enable this practice to be replicated and sustainable include:

• Continuing to raise awareness among producers and various potential partners;
• Supporting communities to develop and implement their own plans for adaptation to climate change;
• Continuing to support producers with assisted natural regeneration, rehabilitation and development of degraded land, and securing assets;
• Supporting producers with small-scale materials to rehabilitate land;
• Capitalizing on opinion leaders, model producers and successful farmers’ associations;
• Organizing study trips and tours to exchange experiences between producers;
• Strengthening skills at local level;
• Ensuring that the highest standards of quality are met for work completed;
• Setting in place community monitoring systems for resource use and development;
• Creating jobs and encouraging income generating activities to reduce pressure on forest resources;
• Extending environmental education to schools;
• Involving the media in mass environmental education;
• Promoting exchanges and partnerships between producers and environmental services.

Testimonial

The village of Roumbouki, located in the municipality of Badaguichiri, in the department of Illéla, is one of the intervention villages for the ARZIKI project. Since 2011, a group farming the 1.7 hectare site of degraded land has included 170 women, who produce vegetables (okra, senna, sorrel, cabbage and lettuce) and woody plants (moringa, apple of the Sahel, pigeon pea and henna).

Aware of the gains achieved since 2011, and keen to reduce travelling distances (1 km to water the plants), they have contributed a sum of 70 000 FCFA to sink a well. In this way, they will be able to grow vegetables with high nutritious and market values all year round and better maintain the woody plants to increase their profits.

For more information

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Nutritious gardens based on moringa and baobab in Burkina Faso (FAO)

Developing non-timber forest products to cover families’ food and nutrition needs

→ **Context**

Cultivation of moringa (*Moringa oleifera*) and baobab (*Adansonia digitata*) in rows on plots of land has been practised for several years by organizations in Burkina Faso and consolidated by a technology package developed as a result of research. With support from partners (Swiss Agency for Development and Cooperation, European Union), FAO/Burkina Faso is helping state technical institutions and organizations to scale out this practice.

→ **Concept**

The cultivation of moringa and baobab in rows on plots of land is emerging as an alternative system, in order to increase the supply of moringa and baobab leaves to communities.

Nutritious gardens involve the intensive horticultural production of *Moringa oleifera* (moringa) and *Adansonia digitata* (baobab), whose nutritional value is recognized.

This production not only enables families to improve their household dietary diversity score, but also helps them to take advantage of the phytotherapeutic benefits of moringa and baobab. In addition, it serves as an income-generating activity for beneficiaries, through the sale of products.

→ **Geographical coverage** → Burkina Faso

→ **Partners** → Swiss Agency for Development and Cooperation, European Union

→ **Financing** → Swiss Agency for Development and Cooperation

→ **Target groups** → Vulnerable households in a state of chronic food insecurity, nutrition rehabilitation centres and residential schools

→ **Nutrition and gender** → Consumption of moringa and baobab improves household dietary diversity scores. Moringa leaves are rich in protein, minerals and vitamins A, B and C. Consuming them is strongly recommended for pregnant and breastfeeding women, as well as for infants. Baobab fruits are particularly rich in vitamins B1, C and calcium.

**Did you know?**

Moringa is a common shrub in the tropics, with *Moringa oleifera*, which originates from southeast Asia, being the species with the highest economic value. All parts of moringa – bark, pods, leaves, nuts, seeds, tubers, roots and flowers – are edible. The plant produces leaves during the dry season and times of drought, and is an excellent source of green vegetable when little other food is available.

The baobab, of which *Adansonia digitata* is the most widely known species, is an African tree that is typical of dry, wooded savannah and can grow to a height of more than 25 m. The fruits (seeds and pulp) are edible, as are the leaves. Rich in fibre, the bark is also used extensively.
Methodological approach

Setting up nutritious gardens involves the following stages:

- Identification of sites and beneficiaries;
- Training beneficiaries in techniques for growing moringa and baobab in rows;
- Training beneficiaries in techniques for processing moringa and baobab products;
- Equipping beneficiaries with gardening and processing materials;
- Training and raising awareness through nutritional education based on non-timber forest products.

Impacts

Food, nutrition and pharmacological impact: Enriching food with moringa in nutrition rehabilitation centres for children improves their nutritional and health status. The various pharmacological applications for moringa (stabilization of blood pressure and blood sugar levels, treatment of bronchitis, ear and eye infections, asthma and gout, revitalizing, antibiotic, cardiotonic and diuretic action, prostatitis prevention, etc.) produces positive effects acknowledged by patients.

Economic impact: There is still no structured distribution and marketing channel for moringa products, so the economic impact remains limited.

Ecological impact: The intensive production of baobab leaves reduces human pressure on natural stands.
→ **Sustainability**

**Social and cultural sustainability:** Dietary habits remain unchanged and production does not contradict local customs.

**Technological sustainability:** Nutritious gardens are similar to horticultural practices already known and practised by communities. Knowledge transfer using the trainer-of-trainers model (training of technical staff, facilitators within households, on-site guidance) enables beneficiaries to adopt this know-how. Meanwhile, raising awareness of nutritional aspects strengthens and improves levels of home consumption of moringa and baobab products.

**Ecological sustainability:** Renewal of the natural resources is assured.

**Economic sustainability:** Setting up a nutritious garden is inexpensive (as part of a project): 1 200 000 CFA francs for a 0.25 ha nutritious garden (gardening materials, inputs, fencing).

→ **Replicability and upscaling**

The main factors that might limit replication of this practice in rural areas are the absence of a permanent water source and difficult land access for women’s associations.

To achieve further change, FAO/Burkina Faso are planning to pursue the upscaling of nutritious gardens, while promoting the **setting up of** moringa and baobab agroforestry parks around plantations. To ensure that everyone benefits from the nutritional and therapeutic properties of moringa, it will be necessary to develop **national standards** (and perhaps subregional ones) for the production and processing of moringa.

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**Testimony**

Dishes based on moringa and baobab leaves are easy to prepare and popular with local consumers.

In an interview, the head of a residential school explained: “Since I introduced moringa into the children’s meals, expenditure on medication has declined substantially.”

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**For more information**

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Implementation of strategic and commercial destocking of livestock through the creation of a dehydrated meat sector in Niger (CESAO PRN)

Processing livestock with poor commercial potential to combat food insecurity in the families of nomadic herders

→ **Context**

Herds that are managed traditionally are uneconomical, given the forage and water that they consume, and the damage that they sometimes cause to trees and shrubs. In addition, each year, scarcity of water and grazing leads to deadly conflicts between different users. In the case of live animal sales, supply easily outstrips demand. This slump does nothing to encourage herders to invest in more “modern” practices, or in prophylaxis treatment for their herds.

Strategic and commercial destocking allows nomadic herders to sell animals that have poor potential. Since supply is much stronger than demand, the herder cannot implement this recommendation within the setting of the traditional livestock trade. A new specific sector was needed, and hence a new meat product. Inspired by the technique for making biltong in South Africa, this new product is known as dehydrated meat from Niger.

→ **Concept**

This approach aims to change “herding as a way of life” to “herding as a way of production”. It entails strengthening the resilience of nomadic herders by enabling them to sell livestock that has poor potential, in order to improve the quality of their core herd, and to manage their savings via mobile phone.

Dehydrated meat from Niger, a source of animal protein, is processed in rural units that become sources of jobs and hence revenue for women and young people.

**What is destocking?**

Destocking involves the sale of livestock that has poor commercial potential or has been weakened. It helps to reduce pressure on natural resources to the benefit of the remaining (core breeding) stock, offering a source of food to herders’ families and providing them with the financial means to ensure the survival of their core herd.
**Methodological approach**

The protocol for producing dehydrated meat from Niger was developed during the pastoral crisis of 2010, when CESAO collaborated with a range of partners to carry out destocking by slaughtering large numbers of animals, before they died of starvation and lost all commercial value. The Belgian Development Cooperation subsequently funded a commercial feasibility study into the value of conducting this approach year-round.

12 basic production units for dehydrated meat from Niger were set up in rural areas, as well as a maturing unit in Niamey, which carries out quality control, packaging and sales of the finished product. Awareness-raising activities were organized for herders on herd management and handling savings using mobile phones.

**Impacts**

*For herders:* Herders, and especially nomadic ones, select the animals that are suitable for transhumance and sell the others at a price that is proportional to each one's meat potential. They become accustomed to the idea of carefully managing their herds by investing the profits of their sales in veterinary care and supplementary feed to protect their core stock. They also save their earnings in the form of electronic money via mobile phones. This practice protects their savings, while fitting in perfectly with their itinerant lifestyle.

*For women and young people:* The primary processing units for dehydrated meat from Niger offer local job opportunities for women and young people, and a subsequent source of revenue.

*For consumers:* More broadly, dehydrated meat from Niger provides consumers with a source of protein at a reasonable price. It is supplied free of charge to beneficiaries of emergency food rations or supplementary and therapeutic feeding.

*For the environment:* Pressure is reduced on pastureland, as is deforestation due to the uncontrolled felling of trees for high altitude pastureland.

**Sustainability**

The experience confirmed that selling animals suitable for culling is a profitable strategy. It was shown that a cluster of 5 units of land supplying one maturing unit needs to attract firm orders of at least USD 300 000 per year to break even and ensure sustainability for each cluster.
Replicability and upscaling

The first challenge is to ensure sales of a new unknown product such as dehydrated meat from Niger. A lobbying strategy is therefore an essential prerequisite to highlight the importance of introducing this new source of animal protein into emergency food rations. CESAO has conducted research into the concept of offering meat meal, sterilized and stored in hermetically sealed packages, suited to the needs of agencies tasked with providing international food assistance.

The second challenge concerns that of developing more fluid systems for transferring and protecting money by phone. The signing of cooperation agreements between telephone operators and some banks and microfinance institutions aims to improve this situation. However, convincing herders to switch from cash savings to using mobile phones to store their earnings will be a long process, requiring extensive awareness-raising.

Extending this approach requires that the Government and its partners invest in raising awareness among herders and that private stakeholders adopt it as a purely commercial activity. Initially, the emergency market must begin recognizing the new product and ensure sales.

Testimonial

Dr Alberto Piubello is the representative for the Damien Foundation in Niger, a Belgian NGO that is supporting the National Tuberculosis Control Programme. He comments:

“I introduced portions of dehydrated meat for tuberculosis sufferers being cared for by my NGO. The results lived up to my expectations, for our patients now had the required protein intake, alongside the anti-tuberculosis treatment to ensure their complete recovery. The only difficulties lay in long-term conservation of the product and making it easier to digest for the sick patients. I am very happy to hear that CESAO has continued research and that sterilized sachets of meat meal are now available. This will further facilitate the preparation and distribution of the protein doses needed by patients living a long way from health care facilities.”

For more information

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Processing of dairy and forage production to strengthen the resilience of herders in Niger (AREN)

Conserving and managing surplus production to prevent periods of shortages

→ **Context**

Niger suffers from an unstable climate and every two years experiences a shortage of forage. In years of forage surplus, only 1/3 is used for animals, while 2/3 are lost due to wind, termites, bushfires, etc. Likewise, in the case of milk, periods of high production during the rainy season coincide with the times that livestock leaves for grazing, a long distance from consumption areas. With no collection and storage system, the surplus milk is poured into ponds.

In order to find a solution to such cases of poor management of surplus milk and forage, the Association pour la Redynamisation de l'Elevage au Niger (AREN) has trained and equipped several women's groups to conserve and process milk. AREN has also supported the production of multinutritional blocks by setting up a feed mill that can process grasses and agricultural residues.

→ **Concept**

The aim of this practice is to conserve and manage surplus forage and milk when it is plentiful, so as to avoid periods of shortages. The challenge is to maintain livestock productivity at an acceptable level throughout the year, particularly milk and meat production, which decline during the dry season.

**Geographical coverage** Niger

**Partners** AREN

**Financing** PASEL since 2002, and FAO

**Target groups** Men and women herders facing problems in managing their surplus production

**Nutrition** Milk is processed into traditional (dry) cheese in rural areas. This cheese is called ‘Tchoukou’ in the local language and is conserved for 3 months. It is used to provide instant enrichment to dishes such as porridge or consommé, especially for children. Since milk is a complete foodstuff, this helps to combat malnutrition. The cheese is also sold on the roadside and is transported to Niamey, providing a source of revenue.

**What is a multinutritional block?**

This is a food mix presented in a solid and compact block for livestock. The food supplements are made from local plant resources (cut grasses, crop residues) and salts. They supplement mineral and protein deficiencies for ruminants, especially during the dry period, when animal feed is lacking in nutrients. These feed blocks are useful to herders since they are made from locally available materials, and can be conserved for several years.
Methodological approach

The stages of implementation are as follows:

- Identification of beneficiaries in a participatory manner: a meeting of herders is held to set selection criteria for the various training sessions (availability, capacity to understand and transfer knowledge etc.) and to identify participants;
- Training of beneficiaries in techniques for processing milk into cheese, and in milk hygiene;
- Training of beneficiaries in techniques for making multinutritional blocks;
- Purchase and installation of materials (solar refrigerators, feed mill);
- Training of beneficiaries in management and advocacy: training lasts one week and particularly teaches participants how to calculate the cost price and sales price of a product.

Impacts

As a result of this practice, surplus milk is no longer discarded and forage is no longer lost at a rate of 66% in a non-deficit year.

The AREN initiative generates revenues for men and women beneficiaries. The dairy products are very popular with women and children. This initiative ensures proper nutrition for children and enables supplies to reach urban centres. Milk and forage processing are resilient practices, for they allow good use and conservation of surplus natural production.

The multinutritional blocks can be stored for several years and used in times of shortage. This strategy also helps to combat poverty, since the blocks are sold. The benefits generated meet other social needs and create a climate of confidence.

Sustainability

The production of multinutritional blocks and processing offers concrete responses to herders’ problems. As a result, the beneficiaries have been quick to adopt these practices. Proof lies in the fact that the women’s group of Toukounous continues its processing activities, despite having received no support since 2004.
Testimonial

Douya Oumarou, 55, is a herder in Saga Gourma, on the road to Say. He has benefited from multinutritional blocks and, during an interview, he explains how:

“When an animal feeds on a multinutritional block, you can see that it drinks a great deal of water, which means that the food is nutritious (an immediate effect). As time goes on, the animal puts on weight and there is a noticeable increase in milk produced by the dairy cows. That means not just better management of grazing, but also richer animal feed.”

Replicability and upscaling

To ensure that this practice can be replicated, action should be taken at the institutional level: beneficiaries should organize themselves into groups and receive training in community life and the group spirit to facilitate the learning process.

For the making of multinutritional blocks, the more local communities are able to benefit from the feed mills, the better the chance of replicating the practice throughout the region.

In order to replicate this practice, it is important that producers master the technical aspect, but they should also be made aware of the importance of processing milk and forage, so as to avoid losses and be able to benefit from these products throughout the year.

For more information

Association pour la Redynamisation de l’Elevage au Niger (AREN)
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Caisse de résilience (FAO)

Consolidating community resilience by strengthening households’ social, productive and financial capacities through an integrated approach

→ **Context**

The food security and nutrition of large segments of Africa’s rural population, in particular in the Sahel and Horn of Africa, is a major concern and is threatened by both chronic and acute vulnerabilities.

Despite the difficult agroecological and social contexts, subsistence farmers and pastoralists have developed grassroots mechanisms to increase their resilience such as organizing themselves in associations, setting up solidarity funds, rotating savings and credit associations (ROSCA), etc., that can be scaled-up with support from humanitarian and development actors.

**The Caisse de résilience (CdR) approach revolves around farming and pastoralist communities – both men and women – connecting and integrating productive, financial and social activities.** The approach takes into account the accumulation and diversification of assets and knowledge as critical elements of resilience.

CdR favours communities’ ownership and commitment to apply agricultural, nutritional, environmental, economic and social good practices, through conditional assistance that allows to reach long-term objectives through activities that also have quick impacts.

CdR particularly applies to women’s associations and groups, supporting their empowerment and improving their recognition at community level for both their economic and social roles.

The approach allows communities to exploit the full potential of their existing capacities and to resort to a variety of options to better anticipate, react and adapt to risks and crises linked to their living conditions in rural areas.

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**Geographical coverage** → Implemented in Central African Republic, Chad, Liberia, Malawi, Mali (since 2014) and Uganda (since 2008) in Africa; and in Guatemala and Honduras (since 2013) in Central America

**Partners** → National and international NGOs, governments, ministries and their decentralized structures, resource partners and United Nations agencies, including the United Nations Entity for Gender Equality and the Empowerment of Women (UNWOMEN), the United Nations Children’s Fund (UNICEF), the United Nations Capital Development Fund (UNCDF) and the World Food Programme (WFP)

**Targeted groups** → Farmers’ groups and women’s associations
What is the “Caisses de résilience” approach and how does it contribute to increasing resilient livelihoods?

“Caisses de Résilience” (CdR) is an innovative community-centred approach which brings together three dimensions: a productive/technical dimension (i.e. sustainable agricultural practices), an economic/financial dimension (i.e. access to credit) and a social dimension (i.e. strengthening social cohesion through farmers’ group and women’s associations). The approach is innovative because the support involves these three simultaneous and complementary dimensions, thereby producing a broader range of opportunities for the beneficiaries as well as strengthening their preparedness to complex shocks and crises.

CdR aims to assist food-insecure smallholder farmers and pastoralists, particularly vulnerable to shocks and crises by increasing and diversifying key assets and knowledge for a better resilience of livelihoods.

→ **Methodological approach**

Putting in place a CdR under a given project requires a minimum of two years in order for good practices to be sustainable and continue beyond the timeframe of the project.

As the objective of each group by the end of the programme is to have strengthened its capacities in the three components (technical, financial and social), the identification of the main interventions – in a participative and flexible manner – is required under each of the three pillars, according to the existing needs, capacities and knowledge.

Depending on available resources, implementation can take at least two forms. If the available budget is significant (e.g. the case of the Central African Republic in 2014), the programme can address the three components simultaneously. If the budget is limited (e.g. the case of Uganda in 2008), funds for at least one component (e.g. the technical component) could be secured for the first year while additional resources are mobilized for the other components during the following years.

The approach can build on and create synergies with ongoing projects or programmes, particularly if they already support one of the components, and therefore could focus on the remaining components.

This approach requires partnerships with other actors according to their specific expertise in the three components. Strong partnerships provide communities with a holistic support.
The first step is to identify geographical areas, groups and implementing partners. A two to three month period is then needed to train community facilitators on agricultural extension approaches (e.g. farmer field schools) and on the management of community savings and loan systems. Trainings are organized by FAO or the most qualified partners.

Each facilitator can support four to five groups – around 20 to 30 members each. Through partnerships with other institutions, the integration of all three components together must be ensured in order for communities to access an integrated package to better anticipate and manage risks, crises and their impacts.

- **Under the technical component**, the main areas of focus include the long-term increase of production, sustainable natural resource management, marketing, preservation and processing of livestock and agricultural production, contributing to disaster risk reduction, climate change adaptation and the improvement of agroecosystem management.

- **For the financial component**, the promotion of savings and credits initiatives at community-level – e.g. village savings & loans associations (VSLA), or savings and credit cooperative organization, based on the principles of ROSCA, whereby the capital is provided by members – is recommended to help beneficiaries understand and take ownership of rules and regulations prior to interacting with formal financial institutions. This is often the only option in rural areas where access to financial services is limited. Savings and loan initiatives allow members to save regularly, increase production, diversify sources of income and invest in their businesses.

When selected populations are very poor, cash transfers are recommended – particularly conditional cash transfers such as public work schemes to build storage capacities, bridges or markets – because they allow for increased contributions to the savings and credit funds. Increase in capital can also be supported by the allocation – through loans or grants – of small processing materials, allowing for members to generate additional income.

- **Regarding the social component**, strengthening community groups is important as is raising awareness on topics such as solidarity within the group and with neighboring communities. Members facing similar challenges can discuss opportunities and share useful experiences. Depending on the local context, the social component could also include nutrition education and other topics such as hygiene, reproductive health, literacy, prevention of violence, etc.

To ensure the sustainability of the initiatives, some groups have decided to set up a system of conditional assistance, requesting that members actually apply good practices – technical or social – to access savings and loans systems. This contributes to the sustainability of interventions in the long term, far beyond a project cycle.
→ **Impacts**

The main impact of this approach is the consolidation of a spirit of entrepreneurship, responsibility and solidarity in the fight against food insecurity and nutrition.

The technical and financial components support the diversification of livelihoods and income sources, as well as the accumulation of assets (seed and food reserves, productive assets, etc.), including financial (e.g. savings, contingency funds). This allows to better anticipate and manage crises. Asset and income diversification and accumulation also translate into social outcomes through key elements for social inclusion at community level, such as strengthened linkages among members and shared knowledge.

Beyond the technical and financial aspects, the CdR approach strengthens local organizations (farmers’ groups and women’s associations), thus contributing to social change, favourable to sustainable development and women empowerment.

→ **Sustainability**

Experience thus far has shown that groups continue to come together after the end of the project and advocate for complementary services, including education, nutrition, leadership and market access – all elements further supporting community resilience. Like the Fome Zero programme in Brazil, CdR applies the “single registration” principle, allowing communities to benefit from a holistic and integrated support – the only way to really achieve sustainable changes.

Strengthening community groups, rural finance management, the application of good practices to reduce vulnerability and improve food security and nutrition at household and community levels all contribute to strengthening resilience.
Replicability and upscaling

To ensure replication and upscaling of the approach, it is key to develop and sustain partnerships with policies and programmes of governments, United Nations agencies and civil society organizations. CdR can easily be integrated into regional initiatives that support resilience, such as: the Global Alliance for Resilience Initiative (AGIR); the Great Green Wall in the Sahel and Western Africa; the Intergovernmental Authority in Development (IGAD)’s Drought Disaster Resilience and Sustainability Initiative (IDDRSI); the Horn of Africa Resilience (SHARE); or the Renewed Efforts Against Child Hunger and Undernutrition (REACH) in different countries.

The CdR approach can easily be adapted to local priorities in a large variety of contexts. The central element of the approach – its difference as well as its strength – is the principle to articulate programme interventions around the three mutually-reinforcing pillars – technical, financial and social – for each group or association.

Caisses de résilience in the Central African Republic

In the Central African Republic, rural communities have been seriously affected by conflict in 2013-2014. To increase their resilience, FAO is implementing the CdR approach to support households develop their agricultural practices, financial capacities and governance structures at community level. FAO has coupled cash transfers with distributions of small processing materials, assistance for the production of quality seeds and support to school feeding and gardening programmes. These activities allow affected households to increase food and seed reserves. Disconnected from the seasonality of rains, such measures have provided households with the opportunity to regularly accumulate and protect their assets year round.

For more information

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Caisses de résilience (webinar)  
http://bit.ly/2kS8TOL

Good practice (in French)  
Les Caisses de résilience en République centrafricaine  
Survival gardens in Niger (NGO Karkara)

Strengthening the resilience of disabled people through horticulture

→ **Context**

Following the food crisis of 2005, a number of disabled people were abandoned by their impoverished families. Alerted to the problem, Niger’s national association for the blind – l’Union Nationale des Aveugles du Niger (UNAN) – immediately gathered its technical and financial partners to find a sustainable solution, suited to this target group.

It was for this reason that in 2006, CBM Australia (Christoffel-Blindenmission) intervened to set up 30 gardens in an attempt to cushion the effects of the crisis on this vulnerable community.

In most communities, disabled people are considered as a burden to their family. For this reason, it is important to offer them an opportunity to be productive and contribute to the well-being of the household and the community. This offers them the chance to develop their potential and lead dignified lives, as laid down by the International Convention of the Rights of Disabled Persons.

In a region that suffers chronic food shortages (due to irregular rainfall), the concept of survival gardens can help to shorten the length of the lean period and even address the food deficit.

→ **Concept**

A survival garden supplies both livelihoods in the form of food and revenue, and health education. Its activities revolve around four pillars: agriculture, income generating activities, improving standards of living and addressing the rights of disabled people. All the activities combine to increase food security for the families of people with disabilities and to foster socio-economic inclusion for these latter.

**Why a survival garden?**

The concept of a survival garden extends far beyond that of classic gardening. It involves a range of activities which together help to meet the essential needs of a rural family. Such gardens offer a number of advantages, among them: the socio-economic inclusion of people with disabilities, prevention of disabilities through horticulture and the promotion of hygiene and sanitation, the promotion in communities of rights for people with disabilities and the fight to halt poverty and the rural exodus.
Methodological approach

Agriculture: Installation and equipment of a garden measuring 625 m² with a water source for irrigation and an orchard of fruit trees, the whole area enclosed by a living hedge; the focus is placed on moringa, for its nutritional value and high market demand. Development of two or three production seasons per year.

Income generating activities:
- Distributing loans to buy small ruminants so as to restock herds (primary source of revenue for rural dwellers);
- Distributing donkey carts (agricultural transport, service delivery).

Improving standards of living:
- Construction of latrines for families;
- Supplying mosquito nets and water filters to reduce incidences of malaria and water-borne diseases (with water often drawn from ponds or other non-drinkable sources);
- Construction of improved stoves to reduce fires and fuelwood consumption;
- Awareness-raising within the community on women and children's health, nutrition, hygiene and sanitation, environmental protection, etc.

Rights of disabled people:
- Advocacy and awareness-raising on the rights of people with disabilities to promote their social inclusion.

Impacts

Produce from the garden compensates for deficits in output from rainfed crops. Sales of garden produce enable beneficiaries to buy supplementary cereals to address food shortages.

Revenue earned from livestock keeping and hiring out donkey carts strengthens the household economy of disabled people who are beneficiaries of gardens, offering them greater opportunities to meet expenses for healthcare, school fees, etc.

The use of latrines, mosquito nets and water filters combines to reduce incidences of malaria and diseases linked to poor hygiene and water quality, resulting in family members becoming more available for other activities.

The impact of survival gardens can be observed in the following areas:
- **Food and nutrition security improves for** families of disabled people benefiting from survival gardens, as a result of small-scale irrigation and continued use of the garden, even after the close of the project.
- **Living standards** of families of disabled people benefiting from survival gardens show clear improvement.
- **Increased revenue** for the disabled person's family encourages his or her socio-economic integration within the community.
- **Increased school attendance** for children of disabled people's families, following awareness-raising sessions conducted by the project: In the case of all families, it was observed that their children attend school, while prior to the project, at least one family in ten did not send its children to school.
Sustainability

Combining fruit trees with horticulture increases long-term production for gardens. The close involvement of municipalities in project implementation has done much to foster community awareness of the concept of survival gardens. The project has strengthened respect towards disabled people.

Replicability and upscaling

Due to climate change, the countries of the Sahel in general, and Niger in particular, are facing adverse weather impacts. Living and production spaces are being invaded by sand, and rainfall is becoming scarce, while falling as heavy downpours. This situation makes producers more receptive to change. The simplicity of the approach and the results encourage its extension. Already, the survival garden model is being replicated in Mahadaga, Burkina Faso (eastern region, province of Tapoa), as well as in Garu and Sandema in Ghana (region of Bolgatanga). In order to reduce the frequency of food crises, and install effective resilience, the Government and its services, as well as other actors, should invest in resolving the problem of access to land, which could compromise the involvement of some vulnerable individuals.

Testimonial

Alio Gouzayé has been a beneficiary of a survival garden since 2012. When asked about how useful he finds his garden, he replies:

“My cereal yields for the 2013 farming season were not good. But the various sheaves of millet that I produced are still in the granary, seven months after harvest. I still haven’t touched it, because I eat the produce from the garden!”

For more information

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From model farm to home garden to combat food and nutrition insecurity in Burkina Faso (HKI)

Improving food and nutrition security for mothers and children under 5

→ Context
Burkina Faso suffers from almost constant food insecurity, which was exacerbated by the global economic crisis in 2008. The adverse effects of these shocks were a rapid decline in the already precarious food security of the poorest households and a deterioration in the nutritional and health status of the most vulnerable groups – children and women who are pregnant or breastfeeding.

→ Concept
Model village farms are set up as places for the transfer of skills from local trainers and target groups made up of pregnant and breastfeeding women and their children under five. The beneficiaries learn techniques for crop and livestock production, before putting them into practice at home by setting up family farms. To encourage a change in dietary habits, grandmothers helped by community health workers offer nutritional advice and conduct demonstrations using farm products.

This crop and livestock production ensures the availability of food rich in micronutrients, and the nutritional advice leads to increased consumption of these foods in households. Sales of part of farm output also help to increase women’s income.

What is a model village farm?
A model village farm is a place for skills transfer, where participants receive practical training to improve their horticultural production and traditional agricultural techniques. This forms part of the more global homestead food production approach. In this way, women and small-scale farmers are provided with the tools and skills needed to cultivate home gardens and rear small livestock.
→ **Methodological approach**

The model village farm approach combines crop and livestock production and involves the following stages:

- Training actors using the training-of-trainers method;
- Setting up 30 model village farms and more than 1 700 family farms;
- Distributing 2 hens to each woman, and 10 hens and one cock to each model village farm.

The approach also uses a communication component to promote behaviour change through:

- The setting in place of interpersonal and mass communication;
- Community self-appraisal for clearer insight into dietary habits;
- Identification and removal of obstacles to consumption of food rich in micronutrients.

→ **Impacts**

The initiative has led to an increase in crop and livestock production during lean periods, producing foodstuffs with high nutritional value (protein, vegetables, eggs, orange-fleshed sweet potato).

There has been a positive impact on mothers’ knowledge and the adoption of key Infant and Young Child Feeding (IYCF) practices, as well as an improvement in haemoglobin levels in children aged 3 to 6 months. However, it was not possible to measure the impact on children’s growth, and the prevalence of anaemia remains high.

The model village farm approach helps to strengthen the production system, enhance the livelihoods of vulnerable groups and improve Household Dietary Diversity Scores.

→ **Sustainability**

The model village farm approach has helped to strengthen nutritional knowledge and promote adequate nutritional behaviour for beneficiaries. However, in order to ensure success and sustainability for the initiative, it is important to address the problem of water availability, which remains critical to ensuring a positive outcome for this type of project. Moreover, it is crucial to include a Water, Sanitation and Hygiene Promotion (WASH) component, since progress made can be undermined by morbidity linked to poor hygiene, faecal contamination, malaria, diarrhoea, etc.
Replcability and upscaling

At institutional level: There is a need to embed this practice as a tool to help local authorities strengthen resilience, integrating it within existing food and nutrition security platforms and harnessing endogenous resources. It is important to disseminate the results of the impact study and advocate for the adoption of these practices in programmes.

At economic level: Adopting a single baseline for a model village farm (cost: USD 1,700) and for a family farm (cost: USD 45) is advisable before upscaling.

At social level: It is crucial to ensure social cohesion and social standards for the requirements of community initiatives in the case of riverside communities sharing the same natural resources (water, land, land management).

At environmental level: It is important to use agroecological species and varieties that are adapted to the production environment and to the setting up of improved farms.

It is also advisable to strengthen the approach by improving the availability and management of water, integrating activities from the WASH and IYCF initiatives and raising the economic status of model village farms by guiding them towards seed production.

Testimonial

Falila Kuela, the mother of three children, lives in the village of Zanré with her husband and two co-wives. A project beneficiary, she learned production techniques for cultivating vegetables (sorrel, onions, tomatoes, aubergines, spinach) at model farm level.

The following season, she shared her knowledge with her husband and two co-wives and set up a home garden, where she also grows cowpeas and orange-fleshed sweet potato. Falila has earned more than USD 80 by selling the surplus output and is now rearing 30 hens (produced from the 2 hens donated by the project).

She comments: “My children are well fed as a result of these crops that are rich in vitamin A. Vitamin A fights child malnutrition and improves eyesight in both children and adults”.

For more information

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Using cash transfers for agricultural development and child focused nutrition in Senegal (CLM)

Improving the nutritional status of children and creating favourable conditions for their growth

→ **Context**

This cash transfer project targeting vulnerable children has been developed against a background of soaring prices and food and nutrition crises, leading to a policy for social protection in Senegal.

Allowances are paid to vulnerable families with children aged 0 to 5 years, so as to increase their food consumption and improve the child’s diet. The allowances also allow access to basic social services, namely education, health care and nutrition, and therefore strengthen human capital. The allowance amounts to a bimonthly payment of 14 000 CFA francs for a six-month period. It is equal to 30% of the food poverty threshold in rural areas, which is estimated at 6 145 CFA francs. Households can claim the allowance for a maximum of two children under 5. The project was launched by the Government of Senegal with funding from the World Bank.

→ **Objectives**

This approach aims, on the one hand, to mitigate the negative impacts of shocks on the nutritional status of children aged 0 to 5 years, and on the other, to develop a cash transfer system capable of meeting a particular need in the country, specifically creating favourable conditions to the growth and development of children.

What are cash transfers?

Cash transfers are sums of money that are regularly paid to poor households. This money is used by the beneficiaries to cover the basic needs of their family, such as food, health care and children’s education.

The cash transfers can also help farmers engaged in subsistence agriculture to escape the vicious circle of poverty by enabling them to invest and produce more food.

In addition, cash transfer programmes help to stimulate local economies.

Cash transfers are an increasingly important tool in efforts to reduce poverty in developing countries.
→ Methodological approach

The stages of implementation are as follows:

- Signing of an agreement with a decentralized financial structure;
- Geographical targeting to identify areas of poor nutritional status;
- Information, awareness-raising and guidance for stakeholders;
- Setting in place support structures (monitoring committee and local selection committee);
- Community-based targeting of beneficiaries; then verification of targeting;
- Drawing up a list of beneficiaries;
- Withdrawal of allowances by beneficiaries;
- Implementing support activities (monitoring growth development, screening and management of acute malnutrition and communication for behaviour change).

→ Impacts

The main spending of allowances was on food (99.4%), and the positive effects were observed at various levels:

At household level: Positive effect on the number of meals eaten by children; reduction in response strategies in the intervention area, reflected in a decline in difficulties and vulnerability for households in those areas.

For mothers: Positive influence on women's participation in information, education and communication sessions; and on women's reproductive health.

For children: Positive effect on variation in diets; and on reduction in morbidity. Better child health management (regularity of vaccinations).
Lessons learned

62.7% of beneficiaries declared themselves “satisfied” with the frequency of allowances, but only 43.1% considered the amount to be “sufficient”, since withdrawing it involved incurring travelling and living expenses.

This approach helped to offer a rapid response to the needs of targeted groups; to select these using a community-based targeting system based on transparency and the involvement of all local actors; and to secure the funds through reliable financial services.

Improved accountability and effective learning have been observed on the part of the administrative structures of social protection interventions; as well as widespread adoption of the system by all actors: NGOs, AEC, delivery structures, administrative authorities, etc.

The practice has helped to reduce migration, combat hunger and malnutrition and avoid certain negative coping strategies.

Replicability and upscaling

The system has been adopted and adapted by the Government of Senegal as part of its family allowance programme. However, it requires monitoring and must be adapted to local conditions, taking endogenous factors into account.

Témoignage

During a village meeting in the region of Matam, northern Senegal, a mother who is a beneficiary explains how she uses the cash transfers for her children: “We thought of the children first, for often the head of the health centre asked us to buy milk, cowpeas, millet and groundnuts, and to mix them up to give to the children. So that’s what I did”. “We have received 14 000 CFA francs, and I used it to pay for the needs of my child, including food. The second and third time, I bought a goat.”

For more information

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Preparedness and response to crises
Emergency destocking as a food and pastoral crisis mitigation strategy in Niger (VSF-Belgique)

Protecting the core breeding herd and supplying fresh meat to crisis-affected households

→ **Context**

The impact of drought on the well-being of herders is well known: loss of purchasing power, food insecurity, child malnutrition and social exclusion.

In periods of drought, pastoral conditions deteriorate dramatically. Pastureland is stripped, ponds and wells dry up and livestock condition becomes poor, with high levels of mortality. Faced with this catastrophic situation, herders sell off their weak and dying animals to ‘opportunistic’ butchers for ‘smoked meat’.

It is in response to these heavy losses that emergency destocking operations were suggested to herders in northern and eastern areas of Niger, in an effort to strengthen their capacity to mitigate forage deficits.

→ **Objectives**

The aims of emergency destocking are many. This strategy helps to reduce heavy livestock losses and protect the core breeding herd, but also to supply meat – from the slaughtered animals – to affected rural households.

In addition, it is an emergency aid activity for livestock keeping, which can be proposed to the committee for prevention and management of food crisis, to be included in contingency plans.

What is destocking?

Destocking involves facilitating the sale of weakened animals in the event of crisis, so as to enable their owners to ensure food security for their households and protect the remaining core herd. In addition, this practice helps to reduce pressure on natural resources. The strategy is therefore a response suited to slow-onset crisis situations, such as drought.

**Geographical coverage** → Niger, regions of Diffa (Mainé Soroa), Tahoua (Abalak) and Maradi (Dakoro)

**Partners** → Herders’ associations, institutions, private veterinarians, veterinary staff, inspectors, butchers, road hauliers

**Financing** → FAO

**Target groups** → Vulnerable herders and crisis affected rural households

**Gender** → Vulnerable women heads of household, with or without malnourished children have been the priority targets of meat distribution. Disabled people and prisons have also received meat.
Methodological approach

The stages of an emergency destocking operation are as follows:

- Information and awareness-raising for herders and herders’ associations;
- Definition of intervention methods and drawing up contracts with partners;
- Selection of vulnerable pastoral and agropastoral households;
- Purchase and transport of animals to slaughtering sites;
- Slaughtering, inspection and cutting of meat;
- Distribution of meat to vulnerable households with malnourished children.

Impacts

For herders: 1 813 cachectic cattle, with no market value, were destocked. More than 79 270 000 CFA francs were distributed to 1 256 herders, with an average of 63 113 CFA francs per herder (30 000 to 50 000 CFA francs/head of cattle and 1 to 2 cattle per herder). This sum enabled households to cover the cost of purchasing two to three months’ worth of cereals.

For rural households affected by food crisis: 25 105 kg of meat were distributed to 6 636 vulnerable households, of which 12% were managed by women; namely 3.78 kg of meat per household (the equivalent of 6 900 kcal/person).

For pastoral resources: Taking an overall consumption figure of 1.7 tonnes of dry matter (DMT) per year and per Tropical Livestock Unit, destocking 1 813 cattle would lead to savings of 2 465.68 DMT.
Replicability and upscaling

The destocking operation responds to a real need and enables assistance to be offered to large numbers of herders and households affected by drought. Success factors to ensure that it can be replicated are as follows:

- Setting up good coordination between all stakeholders;
- Adoption of a participatory approach for all stages of implementation;
- Involvement and participation of herders’ associations;
- Implementing the operation sufficiently early to avoid heavy losses.

Testimonial

Bororo woman farmer Zeina Ali is a beneficiary of the destocking programme. She received money by destocking her weakened livestock and comments:

“The drought was very harsh, with thirst, hunger and heat rapidly weakening the animals, especially the cattle and sheep. We lost a dozen cattle, without counting the small ruminants. This destocking operation has been helpful, as it has enabled us to avoid heavy losses and has given us money to buy cereals, which had become very expensive.”

For more information

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