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FOREWORD (DIRECTOR, a.i)



CERFAM facilitates access to knowledge and best expertise and promotes knowledge exchange to transform these good practices and lessons learned into real and concrete opportunities to promote safer, healthier, and more sustainable food systems.

ood security and nutrition remain a major concern in a world where food plays a central role in our health and well-being. The year 2022 was marked by numerous initiatives and significant progress in food and nutrition security in Africa. The Regional Centre of Excellence against Hunger and Malnutrition (CERFAM), as a key player on the continent, has worked together with all stakeholders to identify and document good practices aimed at improving access to safe, healthy and nutritious food for all Africans.

As a reminder, CERFAM is the fruit of an institutional commitment at the highest level of the State of Côte d'Ivoire and a partnership agreement with the WFP for its management. Launched in 2019 in Abidjan, CERFAM aims to support the efforts of African countries to develop and implement sustainable policies and programs to eradicate hunger and combat all forms of malnutrition.

CERFAM has been mandated to contribute to the discussions by identifying high-impact practices, gaps, needs, challenges, and opportunities in the implementation of policies and programs.

CERFAM facilitates access to knowledge and best expertise and promotes knowledge exchange to transform these good practices and lessons learned into real and concrete opportunities to promote safer, healthier, and more sustainable food systems.

In 2022, CERFAM documented good practices across Africa, covering diverse thematic such as post-harvest losses, rural development, community resilience, nutrition and food fortification, home school feeding, environment and renewable energies, ICT and digitization, in over 13 different countries (including Burkina Faso, Kenya, Cameroon, Chad, Republic of Congo, Côte d'Ivoire and Zambia, to name but a few). Emphasis is also placed on the fruitful partnerships between the various players, the innovative policies put in place and the emerging technologies that have contributed to significant development.

Our aim is to inspire food security stakeholders to adopt and adapt and scale-up these Good Practices in their own contexts. By working together, we can transform food systems in Africa, ensuring food security, sustainability, and adequate nutrition for all.



ABOUT CERFAM

With the support of the World Food Programme (WFP), the Republic of Côte d'Ivoire has established the Regional Centre of Excellence against Hunger and Malnutrition (CERFAM) as part of its efforts to work with African countries in the fight against hunger and malnutrition. The Centre is the result of an institutional commitment at the highest level of the State of Côte d'Ivoire and a partnership agreement with WFP for its management.

CERFAM, under the high authority of the Vice-President of the Republic of Côte d'Ivoire,

responds to the growing demand from African countries to learn from each other as part of South-South cooperation to achieve Sustainable Development Goal 2.

CERFAM identifies, documents, promotes and disseminates good practices and lessons learned recognised by countries, while facilitating the provision of expertise for capacity building and knowledge management.

The Centre aims to bring together all initiatives in the field of nutrition, school feeding, food security, health and community resilience

in a synergy of action with relevant United Nations agencies and other stakeholders.

CERFAM'S KNOWLEDGE EXCHANGE PLATFORM (KEPT)

Since 2019, CERFAM has been developing the mechanisms, tools, and methodology to collect and document good practices, through a dedicated, user-friendly, and innovative Knowledge Exchange Platform-KEPT. CERFAM's Knowledge Exchange Platform (KEPT) has four main components:

Welcome to the CERFAM's Knowledge Exchange Platform (KEPT)

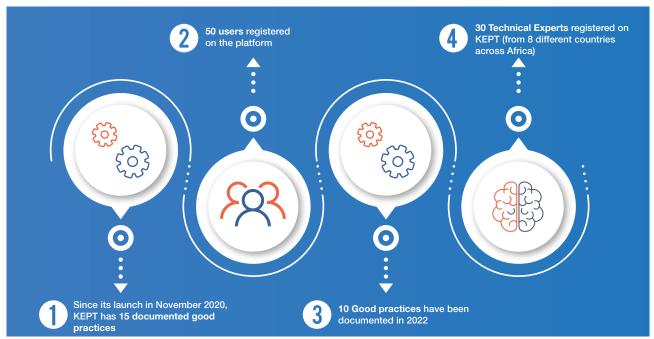


KEPT is a unique opportunity to expand access to certified good practices with a robust body of evidence on improving food security and nutrition across Africa.

KEPT is an effective knowledge management tool that can play a central role in facilitating and leveraging countries' access to successful experiences, which can be scaled up, customized and/ or adapted to different contexts.

KEPT documents good practices from across the African continent, which has a plethora of good practices and local solutions that deserve to be better known, recognized, and scaled up to support national efforts to end hunger and malnutrition.

KEPT A SNAPSHOT



HOW DOES CERFAM DEFINE GOOD PRACTICES?

What Constitutes a Good Practice?

Good practices are interventions, business practices, processes, or methodologies with proven or potential evidence of impact on food security or nutrition. The following aspects are considered in the guideline to identify and select good practices.

CERFAM's methodology categorizes good practices into three levels:

LEVEL 1 : Innovative Practices

Innovative practices may not yet be supported by statistics or formal evaluations. However, they could have already been tested and logically demonstrate a certain level of effectiveness. They could also have been implemented as pilot activities, new techniques or technologies that show promise but with minimal evidence of results.

LEVEL 2 : Successfully Demonstrated Practices

This category of practices has been proven successful, with tangible results, in a given context. Although the practice has only been tested in that context, it has transferable features for other contexts or settings. However, it can also present a risk if applied in a different context.

LEVEL 3 : Replicated or Scalable Good Practices

Practices at this level have demonstrated that they generate desired results in multiple contexts. They are qualified as a good practice and may be widely disseminated for adaptation and adoption by others.

LEVEL 1

Innovative Practices

LEVEL 2

Successfully Demonstrated Practices

LEVEL 3

Replicated or Scalable Good Practices



HOW DOES CERFAM EVALUATE GOOD PRACTICES

CERFAM ASSESSES GOOD **PRACTICES** BASED ON



The criterion of Effectiveness tests whether the practice works and achieves measurable results. CERFAM measures the extent to which the practice's objectived to be achieved and figure out the major factors influencing the achievement of idenified objectives



The pracice should not be complex, so target groups can quickly and easily understand and benefit from it. Different factors, including human, financial, and environmental factors, should be considered and addressed to ensure the practice is technically feasible. The good practice should be easy to learn and implement

ACCOUNTABILIT GOOD GOVERNANCE AND TRANSPARENCY

The project should be transparent with clear structure for participation, management and decision-marking. Information should be readily and always available to stakeholders. Moreover, the project should have explicit funding sources and avoid any conflict of interest.



Efficiency measures how were resources used by the programme in achieving its outcomes. A good practice should demonstrate hat it applies cost-effective methodogies in it implementation, including showing the link between activities and results. Moreover, there is great need to factor social and environmental impacts into he cost of interventions.

INNOVATION **AND LEARNING**

Innovation refers to the component of a good practice perceived as new. It not only includes new technology or technique, but also managerial process and participatoray approach. Monitoring and Evaluation (M&E) during and after project implamentation may provid an opportunnity to learn from the experience and improve similar



innitiatives in the future.

AND ADAPTABILIT

The practice should show potential for replicability and therefore be adaptable to achieve similar objectives in various situations. Evaluation may assist in identifying the conditions of replicability. With clear conditions of replicability, good practices can be replicated and adapted by other practitioners in differrent or similar contexts.

SUSTAINABILITY AND SCALING UP

priority problems related to food

context, in which the practice has

been carried out, should be clearly

considered

security and nitrition. Additionally, the

The good practice should have a durable effect on its target groups, even after the withdrawal of project interventions. Moreover, the practice should demonstrate potential for scale up whith succes factors and lessons learned identified through research or practical experience.

PARTNERSHIP AND MULTI-SECTORIALITY

Participatory approaches are essential as they support a joint sens of ownership of decisions and actions. The proposed practice should involve and foster collaboration among several stakeholders, especialy local communities and national or local authorotoes, to ensure practice is transferred at local and national levels.



CERFAM'S EVALUATION PROCESS OF GOOD PRACTICES

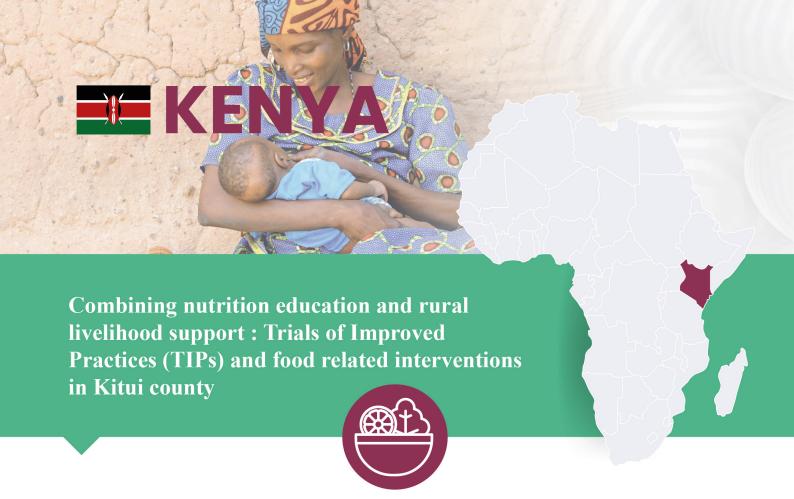
Good practice submitter fills out a preliminary questionnaire showcasing the practice's basic information (location, timeframe, objectif, summary of the practice)

Following the validation of the preliminary questionnaire the good practice submitter will be prompted to complete a quantitative questionnaire

If the submitter scores on excess of 50% on the quantitative questionnaire, the submitter will be sent a validation email and requested to fill out the qualitative questionnaire

Finally, the practice will undergo an evaluation by a three-member expert committee in order to be certified on KEPT





Context:

Kitui County in Kenya is an arid and semi-arid area with high rates of stunting among children. It highlights past projects aimed at improving food security and nutrition, including the United States Agency for International Development (USAID)-funded Increasing Smallholder Productivity and Profitability (ISPP) project. The ISPP project had goals related to agricultural production, nutrition, and agribusiness, with a specific focus on improving infant and young child feeding practices. The United Nations World Food Programme (WFP) supported the project in identifying beneficiaries. The TIPs methodology, which involves trials of

improved practices, was implemented to promote healthy diets, kitchen gardens, and nutrition education. The practice is considered good due to its replicability, relevance, and sustainability, with positive results achieved in terms of dietary diversification, kitchen gardens, food preservation practices, and increased feeding frequency. The partners involved in the project include FAO, the Government of Kenya, County Departments of Agriculture and Health, and WFP.



Project Objectives

Improve Practices (TIPs) and food related interventions in Kitui county.

Methodological approach

The ISPP project employed a methodological approach aimed at improving food security and nutrition at the household level.

The project had three main objectives:

- Agriculture production
- Nutrition
- Agribusiness

To enhance agriculture production, the project focused on improving agricultural practices, climate resilience, and water management for irrigation, aiming to increase the production of 11 nutrient-rich commodities.

In terms of nutrition, the project aimed to improve the nutritional status of women and children through various strategies such as promoting healthy diets, establishing kitchen gardens, providing nutrition education, implementing TIPs (Targeted Interventions for Poverty Reduction), and conducting food

preservation and WASH (Water, Sanitation, and Hygiene) activities.

The project also supported smallholder farmers in transitioning from subsistence to commercial farming by promoting agribusiness, improving post-production management, and facilitating market linkages and trade for the targeted commodity value chains. The identification of beneficiaries and the nutrition education intervention were carried out in collaboration with the United Nations World Food Programme (WFP) and the Food and Agriculture Organization (FAO).

The nutrition training focused on essential topics such as basic nutrition, food production diversification, childcare practices, food preparation, food safety, and food preservation. The TIPs component of the project specifically targeted 100 households and was implemented in Kitui county.

















Nutrition

The project had mixed impacts on nutrition. Initially, there were challenges with minimal dietary diversity among female participants, but by the third year,

the situation improved significantly, with only a quarter of women having a diet with minimal diversity. However, droughts and food scarcity in the third year compromised these positive changes. On the bright side, caregivers whose children had inadequate dietary intake adopted more diverse diets, and many caregivers established kitchen gardens and practiced food preservation, leading to improved nutrition for their families.



Agribusiness

The project successfully linked around 20,000 farming households, including female-headed households, to markets. This connection facilitated incremental sales amounting to USD

4,737,864 during the project period. Contract farming activities played a crucial role, allowing beneficiary farmers to formalize contracts with private sector companies, resulting in income generation through specific crop commodities. This demonstrates the positive impact of the project in enhancing market access and income for smallholder farmers.



Agriculture production

A significant percentage of households (40% or 34,083 households) established kitchen gardens, enabling them to set aside a portion of vegetables for home

consumption while selling or preserving the surplus. Additionally, 18% of project participants practiced food preservation. These activities contributed to improved household food security and provided opportunities for income generation through the sale of excess produce. Overall, the ISPP project had notable impacts on nutrition, agribusiness, and agriculture production. Despite initial challenges and later setbacks due to climatic shocks, progress was made in improving dietary diversity among caregivers and children. Market linkages through contract farming and the establishment of kitchen gardens contributed to increased income and household food security. However, further efforts may be needed to mitigate the effects of climatic shocks and ensure sustained improvements in nutrition and food security for the project's beneficiaries.

agricultural households headed by women, linked to markets.

737,864

in incremental sales over the life of the project.

households, have created vegetable gardens.

> 18%

of project participants practiced food preservation.





The following testimony emphases the impact of ISPP



Eunice's story



Eunice Wango, 45 years old and a farmer in Kitui county, was among the beneficiaries of the ISPP project. Eunice now grows kale, spinach, amaranth and tomatoes in her kitchen garden. She explained, "In our area, rich people would eat a lot of animal proteins and fats, while poor people would eat a lot of simple carbohydrates and salt. As a result, people were sick all the time. But the nutrition trainings taught us how to balance our meals."



Mary, Sub-County agriculture staff

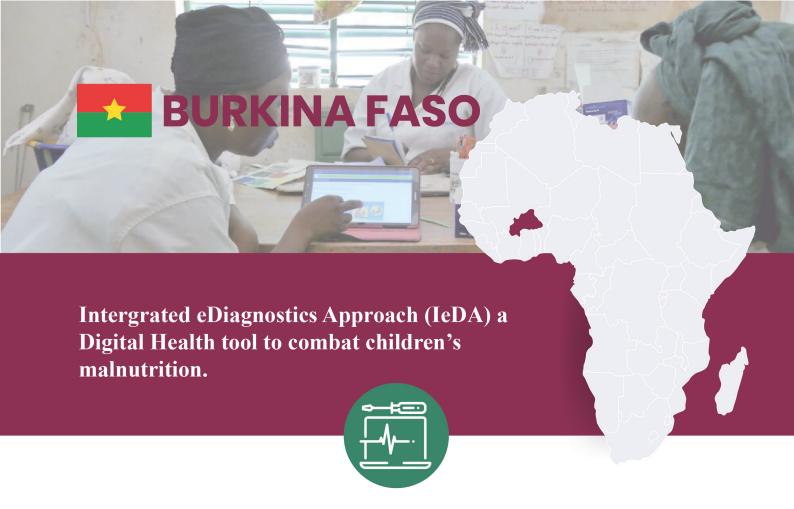


Mary is a sub-county agriculture staff and a TIPs facilitator. She highlighted how the TIPs activities increased the support given to kitchen garden initiatives at community level in her sub-county. She also mentioned how the TIPs trainings helped to improve hygiene at household level. Household members are now cleaning hands during more frequently during critical times, and are improving their cooking practices. Mary expresses her joy when she recounts, "Many mothers still call me saying 'Come and see that

the feeding has improved in my household, Mary!'; or 'Mary, since the programme, I have not taken my child to the hospital as they have not fallen sick again. They feed well and I have really improved on hygiene while cooking and in my compound." Mary continues to say, "The TIPs activities, positively impacted our community. We wish it could be implemented for longer durations and scaled up in other regions."

Partners:

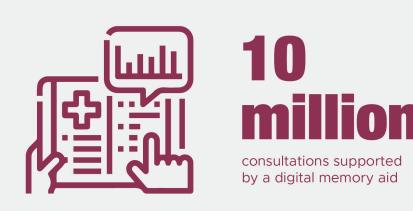
Food and Agriculture Organization of the United Nations (FAO); Government of Kenya; County Departments of Agriculture and Health of Kitui; United Nations World Food Programme (WFP)



Context:

IeDA is a strategy designed by "Terre des hommes", a Swiss Non-Governmental Organisation, aiming at supporting health care workers in primary health care facilities with mHealth tools and methodologies. The Integrated eDiagnostics Approach (IeDEA) comprises a good practice that aims to improving primary health care through digital eHealth tools in Burkina Faso. Digital Health Solutions providing support through technology towards equitable and comprehensive coverage of all communities, including hard-to-reach areas. Despite

progress made in reducing child mortality over the last two decades, preventable and treatable conditions such as diarrhoea. pneumonia, malaria and malnutrition remain the leading cause of death for children under 5 years old in low-income countries. Burkina Faso showcases best practice with an integrated digital health solution implemented at scale: covering 84% of the country's primary health care facilities (PHCs) and with over ten million consultations supported by a digital job aid.





Project Objectives

Digital tool IeDA aims to systematize approaches, improving protocol adherence significantly, as well as reducing manual errors and supporting nutrition service delivery.



USS6.6

The initial investment required for implementing the leDA technology

Methodological approach _

The Integrated e-Diagnostic Approach (IeDA) project employs mHealth tools, including the REC mobile diagnostic support tool, to reduce diagnostic errors and implement the IMCI clinical protocol targeting major illnesses in children. The use of the CommCare platform allows for easy integration of additional protocols and services, facilitating its adoption within the health system. In addition, leDA emphasizes coaching and supervision, utilizing data-driven quality improvement methodologies to support health workers and district managers in delivering high-quality care. The project also incorporates on-the-job eLearning tools to enhance knowledge and sustain practice changes. Data collected through mobile tools are processed and shared to inform stakeholders about health worker performance, supervision, and training needs, enabling efficient management of health systems. IeDA provides tailored data products for each actor within the health system, ensuring effective analysis and sharing of information.

This practice is considered beneficial for several reasons. Firstly, it offers efficiency in resource allocation and cost savings. The initial investment required for implementing the leDA technology was approximately US\$6.6 million, with an average set-up cost of US\$2,617 per health center and recurrent annual expenditures of US\$3,717 per center. However, as the project scales up, recurrent expenditure significantly decreases to a range of US\$118 to US\$519 per year. Furthermore, implementing IeDA leads to substantial savings for the Ministry of Health (MoH) through reduced training times for health workers and decreased paper consumption, projected to be between US\$830,000 and US\$1.7 million annually.

The potential cost savings in the scale-up phase amount to US\$33 to US\$66 per health facility per month, totaling US\$5.8 million during the period 2021-2025.

Secondly, the practice demonstrates replicability. Following successful pilot results in Burkina Faso, leDA has been scaled up nationwide in the country, and further pilot projects have been initiated in India and Mali. This expansion showcases the potential for implementing leDA in other contexts and countries.

Lastly, the practice thrives on strong partnerships and government involvement. The engagement and buy-in from Heads of Districts (HoDs) created a sense of ownership and resulted in some HoDs becoming ambassadors for leDA. The support of the MoH was crucial for integrating the solution into national health systems and securing necessary funding. The involvement of the MoH from the early stages and the collaboration with key champions within the ministry have contributed to the success of leDA. Additionally, a change management approach was adopted, focusing on stakeholder engagement and addressing their diverse needs, which facilitated positive outcomes and avoided potential obstacles. Overall, the practice of leDA demonstrates efficiency, replicability, and strong partnerships, making it a beneficial approach for improving healthcare delivery.





Expanded Access and Coverage

The adoption of leDA technology in 1,189 health facilities indicates an extensive reach and coverage

across Burkina Faso. This expanded access to healthcare services can indirectly impact food security and nutrition by ensuring that individuals have better access to medical care, including diagnostic services and treatment for diseases and health conditions that can affect their nutritional status.



Improved Healthcare Services

The utilization of IeDA has led to a substantial increase in healthcare service delivery, with 965,936

consultations facilitated since December 2014. This increased provision of healthcare services can contribute to improved health outcomes. including the identification and treatment of illnesses that may impact food security and nutrition, such as malnutrition-related cases. By improving diagnostic accuracy for such cases by up to 20%, leDA helps ensure that individuals receive appropriate treatment, leading to better nutritional outcomes.



Enhanced Diagnostic Capabilities

The effectiveness of IeDA in enhancing diagnostic capabilities is highlighted by the

significant improvement in diagnostic accuracy for malnutrition-related cases. This improvement can lead to timely and accurate identification of malnutrition cases, enabling healthcare providers to initiate appropriate interventions, such as nutritional counseling and supplementation. By addressing malnutrition more effectively, leDA indirectly contributes to improved food security and nutrition by tackling underlying health issues that impact nutritional status.

The successful implementation of IeDA in Burkina Faso, as indicated by the widespread adoption, active engagement of health workers, and the substantial number of consultations conducted, demonstrates the effectiveness of this approach in improving healthcare access, accuracy, and overall quality. The improved healthcare services and diagnostic capabilities facilitated by IeDA can contribute to better health outcomes, which are essential for ensuring food security and improving nutrition at the individual and community levels.

Partners:

Terres des Hommes (TdH); Burkina Faso Ministry of Health.





Context:

The processing of shea cakes into butter constitutes a good source of income for women of the town of Réo and other regions in Burkina Faso. However, the waste from shea cake production is also a major source of environmental pollution.

The processing of shea kernels into butter generates a significant amount of waste, oilcakes, which can be in turn used as an alternative fuel to firewood during the processing. Several shea butter production centres have used cake pellets. However, it has a major disadvantage: the cakes in powder form do not produce a good flame because of pileup. In addition, the production of pellets is a tedious operation, especially for large quantities of oil cakes.

The major activities of the Ce Dwane Nyee Association (CDN), presently the Union of Ce Dwane Nyee Women's Groups (UGF/CDN), are the production and marketing of organic and fair-trade certified shea butter. The production involves collection of shea nuts in the classified forests and parks of Tiogo, Kalyo and Baporo, which cover an area of 5,940 hectare in the central-western region of Burkina Faso. 6914 women members of 65 groups/cooperatives from UGF/CDN produce and market around 250-300 tonnes of shea

butter per year. In general, four to five kg wood is required to produce 1 kg shea butter. The production of shea butter alone burns nearly 1,500,000 kg firewood per year and produces 65% oilcakes, solid waste, and liquid waste.

The briquetted oilcake is used in pyrolysis boilers and roasters that produce heat up to 150 or even 2000c. They thus produce the energy needed for the various operations of transforming the shea kernels into butter. The women market the surplus briquettes produced and can thus replace the wood or charcoal used in households for cooking or other domestic purposes. The objective is «zero wood».

Energy optimisation through the use of shea cakes in the form of charcoal briquettes thus contributes to the reduction of the negative environmental impact of the processing of shea kernels, an energy-intensive activity that is a major source of environmental pollution The disposal of waste became a nuisance to the locality of Réo, and habitants living near the shea butter production sites made constant complaints about it. This situation gave rise to the idea of «energy optimization by using shea cakes in the form of charcoal briquettes».



> 720,000 kg

briquettes per year, produced by the union



Job creation and cooperative establishment

The manufacturing of briquettes has created employment opportunities for six women and three young individuals. Additionally, cooperatives have been established to facilitate the production and marketing of fuel briquettes. These initiatives not only enhance economic empowerment but also promote collaboration and community development.



Environmental awareness and collective commitment

The practice of «Zero wood» in shea butter processing and cooking activities has fostered a collective awareness of sustainable production. The women's commitment to this slogan has had a positive impact on territorial ecology and their own lives. By reducing the time spent on gathering firewood, the women have more time for their families and cooperative activities, thereby enhancing their overall well-being.

Partners :

NGO NITIDAE (formerly RONGEAD); **Union des Groupements Féminines Dwane Nyee**

>80%

reduction on firewood consumption



Reduction in wood consumption

The introduction of the new technology for shea butter production has led to a remarkable 80% reduction in firewood consumption in the target communities. This reduction is crucial for food security as it helps preserve natural resources and ensures

needs.

Increased production of briquettes

The union now produces over 720,000 kg of briquettes annually. These briquettes serve as an alternative fuel source for cooking shea fines in households. By utilizing the briquettes instead of burning firewood, the women contribute to sustainable energy practices while maintaining their cooking activities.

the availability of wood for other essential



In summary, the adoption of briquettes as an alternative fuel source has contributed to environmental preservation, economic opportunities, and improved quality of life for the women involved. This sustainable practice alians with the goals of food security and nutrition by promoting resource efficiency, empowering women, and enabling greater focus on essential activities.





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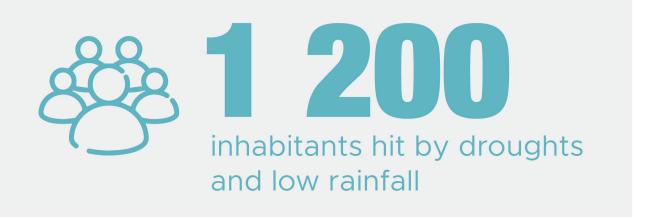




Context:

Goureijma, which is home to 1,200 inhabitants, has been hit by consecutive droughts and low rainfall. These climate challenges have been preventing residents from exploiting the land and bringing negative impacts on agricultural production and livestock farming, leading to the

deterioration of the livelihoods of the community. The situation worsened with the COVID-19 pandemic, resulting in reduced supplies of food commodities, declines in consumption, reduced job opportunities in urban areas and systematic indebtedness.





Project Objectives

The initiative addresses a number of challenges. The first is restoration of productive assets. A stone dike was built to allow flood retreat farming, contributing to better water management in the community, and land was restored using "half-moon" basin techniques to improve agricultural production and livestock farming. Half-moon basins are dug with pickaxes and shovels to form an approximately three-metre half-circle in which earth and manure are mixed. The basins collect rainwater that would not be absorbed by the ground otherwise allowing crops to grow; this is an important system to prevent desertification, recover desert lands and preserve crops. To prevent and treat moderate acute malnutrition, the initiative provides nutritional supplements to pregnant and breastfeeding women, and to children under-five. The community platform GASPA1 was created to set up integrated multisectoral interventions, including mapping of pregnant and breastfeeding women, training of community health agents and procurement of necessary tools for activity implementation and platform management. The initiative also supported an ambulatory recovery centre for malnutrition and nutrition awareness-raising activities to further support the target groups in the long term. A school feeding programme is also part of the initiative. School children receive morning porridge and hot meals at noon, which increases concentration on their studies and ensures that the children eat nutritious foods during the day. Other activities include gardening zones for the production of fresh produce all year to encourage diversification of household food consumption and the restoration of fencing.

Methodological approach

Initially, the Participatory Community Planning (PCP) approach was adopted at the site for a clearer understanding of the land and the issues faced by the local community (carried out in 2018). This was followed by the design of the package of activities in response to the needs identified and the technical and operational capacities available and identified.

The PCP brings together communities, partners and local authorities to identify issues and tailor programmatic responses to local needs. The PCP describes livelihoods, vulnerability profiles, land use and landscapes, exposure to specific shocks and the main local problems affecting people, including gender inequalities. Based on all this information, the PCP generated a practical plan to address the underlying causes of food insecurity and undernourishment and to build livelihood resilience in the medium term. As a result of the CFP exercise, the following activities were implemented:

- Rehabilitation of productive assets: water management through the installation of stone dykes reinforced with masonry to allow flood recession farming;
- Rehabilitation of land with half-moons for agricultural and pastoral cultivation;

Prevention and treatment of Moderate **Acute Malnutrition:**

provision of nutritional supplements to pregnant and breastfeeding women, as well as to children under the age of 5;

Group for Learning and Monitoring of Feeding Practices (GLMFP):

a mapping of all pregnant/lactating women has been carried out and the community relays have been trained and equipped with the necessary tools to set up and manage the GLMFP;

School canteens:

schoolchildren receive a daily morning porridge prepared with specialised nutritious foods and a hot lunch, a source of motivation and attraction;

Market gardening areas:

a community-owned vegetable garden has been created, providing fresh produce all year round and diversifying household consumption;

Creation of a crèche

to look after children so that mothers can carry out production activities (couscous);

Other activities related

to the rehabilitation of assets: fences have been put up around the production areas to prevent animals from trampling and eating the cereals.



So far, the initiative has contributed to improving the community's resilience and been a strong example for continuity of similar actions in the region. Focusing not only on transferring technologies but also on teaching local stakeholders how to pursue the activities, the initiative built sustainable bases for local economic and social development.



Increase in Cultivable Land

The increase in cultivable land from 8 hectares to 24 hectares provides an opportunity for increased agricultural production. This expansion can lead to a greater availability of

food within the community, contributing to improved food security. With more land for cultivation, the community can grow a variety of crops, diversifying their diet and ensuring access to nutritious foods.



Half-Moon Basins

The creation of 13 hectares of half-moon basins, with 8 hectares dedicated to agriculture and 5 hectares to pastoralism, indicates a focus on water

management and sustainable agricultural practices. Half-moon basins can enhance water availability, leading to improved crop yields and livestock forage. This can contribute to increased food production and better nutrition for the community.



Investment in Carts and Livestock:

The income generated by selling one-third of the production and investing it in carts and livestock has various implications for food

security and nutrition. The carts' introduction reduces the time spent on collecting water and wood, allowing households to allocate more time for agricultural activities or other essential tasks, including food preparation. Livestock can provide a source of food, income, and additional nutritional resources, enhancing food security within the community.



Empowerment and Ownership

Ensuring the whole community's empowerment and ownership of activities is crucial for the sustainability of the initiative. When communities actively

participate in decision-making processes and take ownership of projects, they are more likely to sustain and expand the implemented practices. This empowerment can lead to continued efforts in food production, management, and utilization, contributing to long-term food security and improved nutrition.



Local Authority and Good Governance

Involvement of local authorities and state decentralized services. along with a focus on enhancing social cohesion and promoting

good governance, strengthens the initiative's success and sustainability. Collaborating with local authorities can provide support, resources, and guidance necessary for implementing effective food security and nutrition interventions.



Reduced Migration and Conflicts

The intervention's contribution toward reduced migration and conflicts between breeders and farmers caused by

transhumance is significant. By providing alternative income-generating activities and promoting peaceful coexistence, the initiative helps maintain stability, reduce displacement, and improve food security and nutrition outcomes within the community.





Construction of Wells

The construction of three wells for livestock farming and gardening improves water access, which is vital for the health and productivity of livestock and agricultural crops.

Sufficient water availability contributes to increased food production and can positively impact the community's food security and nutrition outcomes.



Greater Food Supply and Improved School Attendance

The increased food supply in the local market and improved school attendance are crucial outcomes for sustainable

development. A greater food supply means increased availability and access to nutritious food, contributing to improved nutrition. Improved school attendance indicates that children have more time for education, which can have long-term benefits for their well-being, knowledge acquisition, and future opportunities.



The practices implemented in this project hold the potential for replication among Sahelian countries facing similar challenges. However, it is essential to design activities based on the local context and identified needs during participatory community planning sessions to ensure their relevance and effectiveness. By tailoring interventions to specific contexts, other communities can replicate successful strategies to improve their own food security and nutrition outcomes.

Partners:

WFP; UNICEF





Reducing post-harvest losses on tomato, cassava, maize and mango value chains



Context:

YieldWise was designed as an integrated solution to PHL. In doing so, YieldWise integrated four key interventions, namely Technology, Market Linkages, Access to Finance, and Training and Aggregation, in a market-led solution to Post Harvest Losses

Based on the potential impact, together with potential for demonstration effects and the local context, four value chains were identified in three countries as the focus for YieldWise:

Tomatoes in Nigeria (Fruits & Vegetables):

Nigeria is the largest tomato-producing country in Sub-Saharan Africa. Tomato is a high value fruit crop, however PHL are estimated at 45-60% of production.

Cassava in Nigeria: Nigeria is the largest cassava producing country in world, making it a vital staple and commercial crop to the country's economy. Cassava is produced across the majority of the country, however, post-harvest loss rates remain high on cassava tubers and roots.

Mango in Kenya: Mango is an important food and cash crop and production in Kenya has increased by 400 percent from 2001-2012. A significant proportion of the crop is lost during and after the harvesting process.

Maize in Tanzania (Cereals & Grains):

Maize is a particularly important crop. Along with other cereals, it forms the bulk of the Tanzanian diet, yet 20-40% of the maize harvest is lost each year. 20% of cereals are lost before they even make it to market.





Project Objectives

The initiative began in 2016 and is ongoing. According to the iFooc/ and Agriculture Organization (FAO), food loss is of great importance to combat hunger, raise incomes and improve food security. Overcoming this by implementing effective PHL programs requires that an in-depth assessment of the value chains of relevance be conducted, identifying areas in the value chain where the losses are the most significant.

Methodological approach

YieldWise was designed as a holistic solution to overcome PHL in the four above detailed value chains. By integrating and targeting the interventions into a single market-led solution, YieldWise aimed to overcome many of the challenges that previous initiatives have

faced. The four interventions (Technology, Market Linkages, Access to Finance, and Training and Aggregation) were identified as being the most key in overcoming the root causes to food loss and waste in the value chains of relevance to the initiative.







Post-Harvest Loss Reduction

The project achieved a significant reduction in post-harvest losses of 20 to 30 percent across critical

value chains in East Africa. This reduction implies that more food is preserved and made available for consumption and distribution. By minimizing losses, the project contributes to improving food security by increasing the quantity of food available for both farmers and consumers.



Farmer Impact

The project positively impacted the lives of over 300,000 farmers in East Africa. By implementing loss-reducing technologies and providing support, farmers were

able to enhance their productivity and reduce post-harvest losses. This increase in agricultural productivity can lead to improved food security for the farming communities and potentially increase their income and livelihoods.



farmers in East Africa impacted by this project





Technology Utilization

The project successfully improved the utilization of loss-reducing technologies in specific value chains such as maize, mango, and tomato in

Tanzania, Kenya, and Nigeria respectively. By introducing and promoting these technologies, the project helps farmers minimize losses during harvesting, storage, and transportation. This leads to increased availability of food in the market and potentially improved nutrition for consumers.

Strengthening Cassava Processing

In Nigeria, the project strengthened the capacity of local cassava processors, such

Rockefeller's partner Psaltry. This collaboration resulted in increased outreach and impact with local cassava producers, expanding from working with approximately 1,000 farmers prior to the project to 6,500 farmers in 2019. This increased engagement can improve the productivity and income of cassava farmers, thereby enhancing their access to food and potential nutritional intake.



The project's impact on food security and nutrition is evident through the reduction in post-harvest losses, increased farmer productivity, and improved utilization of loss-reducing technologies. By addressing these aspects, the project contributes to a more efficient and resilient food system, resulting in increased food availability, reduced wastage, and potentially improved nutrition for both farmers and consumers.

Partners:

- The project was funded by the Rockefeller Foundation;
- The implementing entities were: IDH, Nigeria Cassava Chain; TechnoServe, Kenya- Mango chain, Nigeria-Tomato chain; Green Revolution in Africa (AGRA), Tanzania- Maize chain



Context

In the North-West Region and the West Region of Cameroon, the local populations are a conglomerate of many ethnic groups, as a there were many immigrants from other regions and from neighbouring countries, particularly Nigeria. The economies of the two regions are deeply rooted in agriculture. According to some estimates, more than 80% of the rural population depends solely on agriculture, including a strong livestock sub-sector.

Lack of water sources close to the local communities presents a real challenge for local producers. In the target communities, watering cans of up to 20 litres were first used to take water from the streams to water the crops, forcing producers to run between the stream and their plots several times a day, which drained time and energy, especially for

women, who are mostly the household managers. Notwithstanding their efforts, the crop yield was still low due to insufficient water. They farmed small portions of land because of the difficulties in lifting water from the stream with watering cans. Solar water pump, allowing farmers to have constant running water from a pipe, was finally a remedy to this long-term problem. Provision of affordable solar pumps for small-scale irrigation, a revolutionary technology to help farmers increase their resilience capacity to climate change in Cameroun was part of a large project entitled «Neem trees and vegetable gardening for climate change mitigation and socio-economic needs in Ngoketunija Division».



of the rural depends solely on agriculture

Project Objectives

Implementing market gardening and agroforestry were some of the main activities proposed to help increase the household income, nutrition, and food security.

Methodological approach.

The project focused on addressing the water lifting challenges faced by smallholder farmers, particularly women, through the implementation of solar water pump systems. Key activities included organizing farmers into groups, conducting awareness sessions on the benefits of solar water pumps, providing technical training on irrigation farming with solar pumps, and facilitating exchange of experiences through focus

group discussions. Farmers actively participated in the development of the innovative solar water pump system and received training on its techniques and usage. They became reference farmers, sharing their knowledge with others. The provision of solar water pumps was a collaborative effort, and the private sector played a role by providing training on system maintenance.





Training of farmers

A total of 357 farmers, with a majority of them being women, have been trained on the use of solar water pumps for irrigation farming. This

training equips them with the knowledge and skills to effectively utilize the technology for agricultural production.



Increased income and improved living conditions

The initiative has resulted in increased income for the pilot smallholder farmers, leading to improved living conditions for 260 households. This suggests that the use of solar water pumps has enhanced their productivity and profitability, enabling them to meet their basic needs more effectively.



Enhanced vegetable production

The initiative has specifically contributed to increased vegetable production among

smallholder farmers. This has strengthened the food and nutrition security of local communities, as the availability of garden crops, including vegetables, has improved the nutritional intake of the beneficiary communities.



Diversification of income sources

The additional income generated from the sales of the crops has not only

improved the nutritional intake but also allowed the smallholder farmers to purchase other food crops. This diversification of income sources contributes to a more stable and varied food supply for the beneficiary households.



Affordability of other household needs

The increased income resulting from the initiative has made other household

needs, such as medication and school fees, more affordable for the beneficiary families. This implies that the initiative has not only improved food security but also positively impacted other aspects of their well-being.



Financial empowerment and community development

The financial empowerment of the beneficiary communities, especially women, has led to their active participation in various community development projects. These include the construction of community schools, bridges, and halls, showcasing the positive spillover effects of the initiative on community development and infrastructure.

In summary, the text demonstrates that the use of solar water pumps for irrigation farming has had a significant impact on food security and nutrition. It has increased farmers' income, improved the availability of nutritious vegetables, and empowered the beneficiary communities economically, leading to visible achievements in community development.

Partners:

- Forest and Agroforestry Promoters (FAP)
- The local government's technical staff around in the North-West and South-West regions
- SonoInter System Commerce General in the Northwest Region
- Destin Solar Technologies based in the West region were the solar water pump system suppliers.



Context:

The objective of the EQUITE programme was to contribute to the sustainable economic development of low-income countries and to fight against poverty, to strengthen family farming by supporting the development of fair trade and sustainable sectors in West Africa (Côte d'Ivoire, Ghana, Burkina Faso, Mali and Togo).

Burkina Faso is a Sahelian country that faces several important development challenges scarcity of employment opportunities, very low levels of remuneration and difficult living conditions for the population, and precarious environmental conditions. As in most African

countries, agriculture is one of the main sources of activity and income for about 80% of this population, which is also very young. In the Hauts-Bassins region, where the Kénébio project is based, pressure on forest resources is increasing due to the growing need of the population for agricultural land and heating energy, particularly wood and coal. New agricultural practices, based on ploughing and the use of chemical inputs, are contributing to a more rapid degradation of soils and biodiversity, a degradation accentuated by the effects of climate change.



80%

of the population's main sources of activities and income are agriculture.



Project Objectives

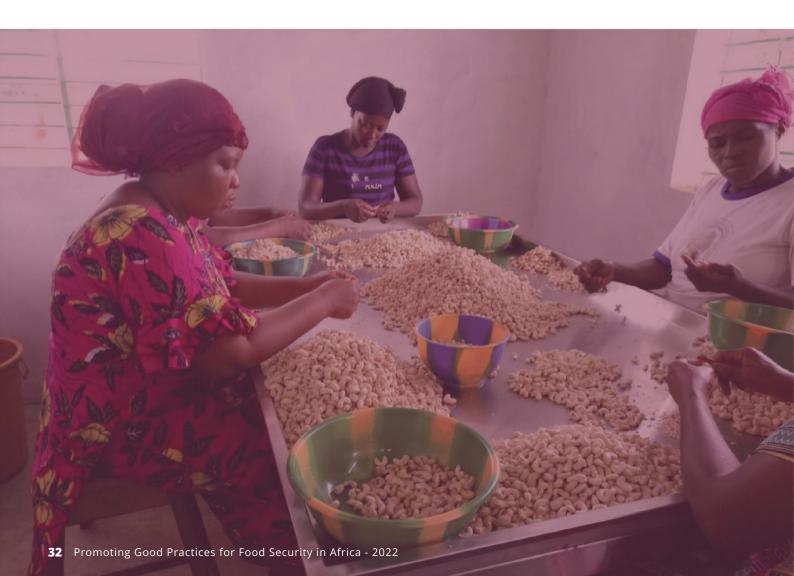
The objective of the KENEBIO project is to support COOPAKE members in diversifying and integrating their agricultural production and transform the energy recovery of the waste from this production, as part of a dynamic development process that respects the natural environment.

Methodological approach -

Pyrolysis is a technique that allows the use of waste from certain agricultural products as fuel in the processing of these products. This thermochemical process offers a good alternative to the intensive use of firewood and effectively combats deforestation. The pyrolysis oven of the COOPAKE cashew processing unit allows the use of cashew shells. Injected into the reactor environment heated to nearly 1,000°C and in the absence of oxygen, the shells are burned, releasing some of their chemical compounds to produce pyrolysis gas and bio-char. The gas provides the thermal energy needed to

operate the processing unit and the bio-charcoal, after burning the nutshell to remove the oil content, is used for nut processing and other uses, including domestic uses.

The new process of using waste from the processing of agricultural products reduces the massive exploitation of wood and can help the cooperative to achieve its objectives; it can, in fact, offer them greater access to local and international markets, and even help them to position themselves on the fair market where prices are more remunerative.







Improved worker conditions

The technological innovation. specifically the use of pyrolysis ovens, has reduced the drudgery

of workers in the processing unit. The previous method of using wood and generating smoke was harmful to their eyes and health. By eliminating the harmful smoke, the innovation has created a safer and healthier working environment for the workers involved in the processing of almonds.



Environmental sustainability

The technological innovation aligns with environmental preservation and contributes to

the reduction of greenhouse gas emissions. The pyrolysis oven reduces the reliance on wood and its associated negative environmental impacts. By adopting more sustainable practices, the innovation helps protect natural resources, promote sustainability, and mitigate climate change. This has broader implications for long-term food security and environmental sustainability.



Enhanced product quality

The use of the pyrolysis oven has contributed to improving the quality of the almonds produced.

This improvement in quality has been recognized through certifications such as Fairtrade International and SPP (Symbol of Peasant Producers). These certifications are known for their strict standards in areas like environmental preservation and reduction of greenhouse gas emissions. The higher quality of the almonds ensures that consumers receive nutritious and safe products, which can contribute to better food security and nutrition.

The text highlights the positive impact of the technological innovation on food security and nutrition. It has improved the working conditions for processing unit workers, enhanced the quality of the produced almonds, and promoted environmental sustainability. These outcomes contribute to ensuring safe and nutritious food production while minimizing negative environmental impacts.

Partners :

NGO NITIDAE





Context:

The good practice relates to the steps/process the Country took in transforming the school feeding from a WFP implemented to a government Home Grown School Meals (HGSM) programme. The transition took place over a two-year period (2018-20).



Project Objectives

The project aimed to retrocede operational and cost management of the home-grown school feeding programme from the WFP to the government.

Methodological approach

The transition of school feeding from a WFP implemented programme to a Home-Grown School Meals Programme managed by the government started with an Institutional Capacity Assessment (ICA). The ICA was a government-led initiative which involved relevant stakeholders to foster a common understanding of challenges and gaps in the design and management of the HGSM programme. Given that the ICA provided multi-sectoral evidence, it required multi-stakeholder participation to ensure consensus and agreement on the way

forward. The ICA was coordinated through Ministry of Education as the programme was implemented by that ministry. The initiative to transition to a government managed Home-Grown School Meals Programme was a joint undertaking comprising the government through the Ministry of Education and WFP. A national Technical Working Group facilitated and supported the transformation/transition process through multisectoral consultative fora at national, provincial, district and school levels





Increased coverage

The practice has been successfully scaled up to 70 districts, representing approximately 60% of the total districts in the country. This

expanded coverage implies that a larger population, including more communities and schools, will benefit from the practice. By reaching a greater number of districts, the initiative has the potential to positively impact food security and nutrition on a larger scale.



Phased approach

Recognizing resource limitations, the government has proposed a phased approach to implementing the practice in schools. This approach allows

for the prioritization of schools based on available resources and other considerations. While it may take time to reach all schools. the phased approach ensures that progress can be made steadily and effectively, maximizing the impact of the practice over



Planned full coverage

The government has set a goal to scale up the practice to all 116 districts in the country, aiming for 100% coverage. This ambitious plan demonstrates the

commitment to ensuring that the practice reaches all learners from Early Childhood Education (ECE) to primary schools, including both public and community schools. By targeting all learners, the initiative can have a comprehensive impact on food security and nutrition across different age groups and educational settings.

Overall, the text suggests that the scaling up of the practice to a larger number of districts and the government's commitment to reaching all learners indicate a positive impact on food security and nutrition. The increased coverage and planned expansion demonstrate a strategic effort to address these issues at a national level, with the phased approach allowing for efficient utilization of resources. By targeting schools and learners, the practice has the potential to improve food security and nutrition outcomes among the student population, contributing to better overall







Context:

Benefiting from a strong commitment and a high-level political will, the Ministry of Ministry of Nursery and Primary education in Benin has benefited since 2017 funding of more than 48 billion FCFA to implement the (PNASI). In all sectors and at all levels level (national and local), school feeding in Benin is a priority for all stakeholders, with clear discussions on the challenges and opportunities.

Benin's PNASI is part of the operationalisation of the National School Feeding Policy (PNAS) adopted in 2014, the vision of which is that «by 2025, all schoolchildren in Benin have access to a balanced, healthy and varied diet that reduces their vulnerability to hunger and improve their access, retention and their performance at school.



48 billion FCFA

to implement the PNASI



Project Objectives

The objective of the PNAS is to contribute to the achievement of universal primary education in Benin by strengthening school nutrition through a multi-sectoral approach that gives priority to local purchases

Methodological approach -

The process of elaborating the law on school feeding in Benin followed a rigorous and progressive methodology, involving the World Food Program (WFP) and various governmental actors. Through structured stages, a validation workshop was held to gather opinions and amendments on the preliminary draft law, under the coordination of the Ministry of Nursery and Primary Education and with the support of the WFP. This document, the fruit of national and

regional consultations, establishes the fundamental principles of the future law, such as the right to food security, health and nutrition education, equity, direct purchase from local producers, among others. The WFP, committed to the program's sustainability, has included this initiative in its strategic plan, underlining the importance of this law for social cohesion and agricultural development. The ultimate goal is to feed all children in public elementary school.





Geographic Coverage

The PNASI program covers all rural areas of the country. ensuring that its interventions reach the most vulnerable populations in terms of food

security. By targeting rural areas, where access to nutritious food is often limited, the program addresses the specific challenges faced by these communities.



Targeting Food Insecure

The PNASI specifically focuses on areas with food insecurity. This targeting is crucial as it

directs resources and interventions to communities that are most in need. By addressing food insecurity in these areas, the program improve access to nutritious food and ultimately enhance food security.



Addressing Low School Enrolment

In addition to food security, the program also addresses low school enrolment. This indicates

a recognition of the interconnection between education and nutrition. By targeting regions with low school enrolment, the PNASI ensure that children in these areas not only have access to adequate nutrition but also receive education, which is vital for their overall development.



Expansion of Coverage

The program has expanded its coverage over time. Initially covering 1,574 public schools in 68 municipalities in the first

year, it currently covers 3,850 schools in all 77 communes of the country. This expansion indicates the program's success and its ability to reach a larger number of schools and communities, thereby potentially increasing its impact on food security and nutrition.

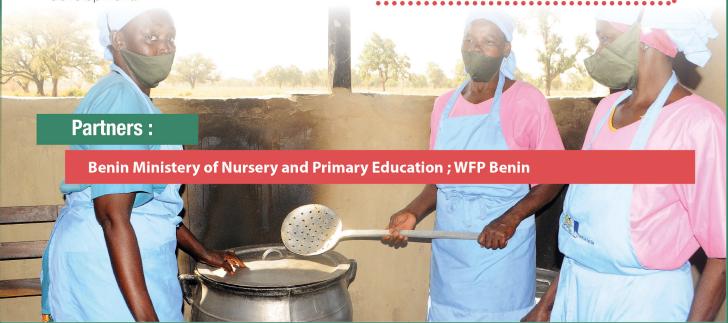
> First year

public schools covered by the program in 68 municipalities

> Currently

public schools covered by the program in all 77 communes of the country

Overall, the expansion of the program's coverage suggests its effectiveness and potential for even greater impact in the future.





Strengthening resilience to climate change by developing the mango value chain



Context:

The practice was developed in Kitui County, Kenya. The aim of the experiment was to promote production and value chain processing using mango varieties that are tolerant of climatic variability. The beneficiaries developed their capacity to improve their livelihoods by adopting climate-tolerant mango varieties.





Project Objectives

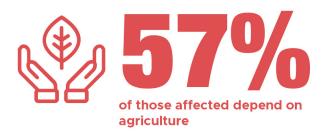
The aim of the project was to increase the resilience of target communities to climate variability and its impact on sustainable food security and the environment, while creating employment opportunities for the participating community. It aimed to increase mango production using appropriate production technologies, knowledge, and skills in the mango value chain. To ensure the sustainability of the project, a mango processing company (Kitui Enterprise Promotion Company) was established. To ensure the sustainability of the project, a mango processing plant (Kitui Enterprise Promotion Company) was set up. The farmers sell mangoes as raw materials, while the company processes the mangoes into several products: puree, juice, mango flakes and enriched flour. Mango is collected from farmers through the cooperative, where farmers have a collection centre and payments are made through the same channel. Value-added mango products are marketed through supermarkets and retail outlets.

Methodological approach _

The Kitui Development Centre (KDC), a capacity building organisation, conducted a baseline survey in parts of Kitui County on the impacts related to household income and climate change in March 2012. Analysis of the survey results indicated that 57% of respondents depend on agricultural produce, 16% of respondents engage in small business activities such as selling vegetables and the rest depend on benefactors. The baseline survey therefore demonstrated a need for farmers who rely heavily on farm produce to be trained in better farming methods and market access in order to increase their farm income.

The project further aimed to train mango producers on financial management and mango grafting and fruit tree nursery establishment and management:

- 1. Providing technical assistance to support the KDC staff and management on project design and development of the business plan
- 2. Training the youth on mango grafting and fruit tree nursery establishment and management
- 3. Training local farmers on financial management









The number of project beneficiaries

increased from 800 to 3120 farmers, accounting to 10% of the total mango farmers in Kitui County.



6 mango producer cooperatives active

Average mango trees grew from 5 trees per farmer to 50 trees per farmer in the project area.



Due to the project activities.

farmer income increased after the sale of mangoes. Household income thus improved. The average

household income increased from ksh 2700 to ksh 15000 per year depending on the yields.



The income improvement at farmer and household levels

are attributed to the increased

training on good agricultural practices and increased uptake by the processing plant. The collaboration with supermarkets and retail outlets practices also enabled increased access to markets.



farmers benefiting from the project



trees per farmer in the project area



Ksh

the average household income per year depending on yields

Partners:

Kenyan Development Corporation (KDC), USAID, KARI (Kenya agricultural research institute), Ministry of Agriculture (MOA), Microfinance Institutions, Ministry of Industrialization, Kitui county Government.





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