



# FINAL EVALUATION OF CATHOLIC RELIEF SERVICES (CRS) MALI “DUWUTE” PROJECT AID-FFP-G-12-00056



Vaccination enclosure, M'bediatt



Creating a fishpond at Moussawely

## Final Report

Study carried out by:



May 2014

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## ACRONYMS AND ABBREVIATIONS

<b>CRS :</b>	Catholic Relief Services
<b>CSPEEDA:</b>	Centre Sahélien de Prestation, d'Etudes, d'Ecodéveloppement et de Démocratie Appliquée (Sahel Center for Services, Studies, Eco-Development and Applied Democracy)
<b>CFW :</b>	Cash for Work
<b>GAPRU:</b>	Groupe d'Alerte Précoce et de Réponse aux Urgences (Early Warning and Emergency Response Group)
<b>NRM :</b>	Natural Resource Management
<b>NGO :</b>	Non-Governmental Organization
<b>USAID/FFP:</b>	United States Agency for International Development/Food For Peace

## EXECUTIVE SUMMARY

This is the final evaluation of the DUWUTE Project funded by USAID/FFP and implemented by Catholic Relief Services (CRS) and its local partner, the Sahel Center for Services, Studies and Eco-development and Applied Democracy (CSPEEDA). **DUWUTE**, which means « **self help** » in the Soninke and Sarakolé languages, is an emergency food security project. It was undertaken in response to 1) Mali's multi-dimensional crisis (of security, politics and institutions) in 2012, and 2) the poor rainfall that seriously affected the growing season of 2013 and exposed numerous localities to vulnerability in the face of a food shock. For the period from September 2012 through April 2014, its intervention zone was in the communes of Dogofry, Koronga and Guénèibé in the district of Nara, in the Koulikoro region of Mali.

In this zone, agriculture is the principal activity and source of income for over 70% of the beneficiary communities, followed by livestock and small trades.

Overall, the DUWUTE project has proved its relevance to the target populations in the three communes. In all the intervention zones, it is recognized as a real success by beneficiaries, non-beneficiaries and the focus groups.

## I. INTRODUCTION

This document is an evaluation report of the DUWUTE Project funded by USAID/FFP and implemented by Catholic Relief Services (CRS) and its local partner; the Centre Sahélien de Prestation, d'Etudes, d'Ecodéveloppement et de Démocratie Appliquée (CSPEEDA) – Sahel center for Services, Studies Eco-development and Applied democracy – in the communes of Dogofry, Koronga and Guénèibé, all part of the district of Nara in the Koulikoro region.

An emergency project, DUWUTE aimed to improve households' access to food resources, through CFW; improve households' nutritional/food and agriculture/NRM practices and improve the community's organizational capacity.

Surveys—undertaken to support this final evaluation—covered the direct beneficiaries, non-beneficiaries and focus groups including the local technical structures and NGOs operating in the field, traders, local government bodies and religious leaders. Concerted efforts were made to ensure an ample proportion of women took part and had their voices heard.

SPSS was used to analyze the data collected and the findings.

The report is broken down into the following sections:

- presentation of the study;
- background and justification of the study;
- presentation and analysis of the findings;



- lessons learnt;
- conclusions ;
- recommendations.

## II. BACKGROUND AND JUSTIFICATION

CRS and their local partner, CSPEEDA implemented an emergency food security project funded by USAID/FFP in the communes of Dogofry, Koronga and Guénèibé in the Nara district, Koulikoro region in Mali. The project started in September 2012 and was to finish in September 2013, but received two no cost extensions, first to the end of February 2014 and then to the end of April 2014.

Overall, the project targeted 4,541 households in 50 villages, with the objective of improving farming and pastoralist households' resilience to shocks affecting food security. In order to attain this objective, the project was designed to:

- increase households' access to food resources in the short term through CFW (target : 4,541 households)
- improve household practices concerning nutrition/food consumption and agriculture/NRM (target : 1,500 households for nutrition/food consumption, and 1,680 for agriculture/NRM) ; and
- improve community capacity to recognize and respond to shocks (target: 50 communities).

Project staff carried out frequent monitoring during the life of the project, along with a real-time internal evaluation conducted in early August 2013.

### 2.1 Overall objective of the evaluation

The overall objectives of the evaluation were to measure:

- the implementation, impact and sustainability of the DUWUTE project in terms of household food security ;
- changes in levels of nutritional and agriculture/NRM practices;
- the operations of Early Warning groups in targeted communes in the district of Nara.

### 2.2 Specific objectives

- describe the extent to which the project has achieved its aim, its strategic objectives and intermediary outcomes and the way in which they were achieved ;
- identify all the other results of the project, anticipated and unexpected;



- describe how the activities implemented (rehabilitation of infrastructures, early warning groups, training in nutrition and agriculture/NRM) continue to be used by project participants (if at all);
- provide an update on implementation of recommendations made during the real-time evaluation;
- establish the principal lessons learnt (positive and/or negative) of project implementation ;
- analyze the effectiveness and sustainability/viability of the early warning groups.

Overall, the evaluation should inform CRS and stakeholders of the outcomes of the project, the effectiveness of the process and the sustainability of project activities.

### III. METHODOLOGY

#### 3.1 Organization of the Study

In conformity with the terms of reference of the consultation, the following actions were taken:

- contact was made with the client (CRS) to establish details of the methodology and planning for the study implementation;
- development and review of the questionnaires (beneficiaries, non-beneficiaries and focus groups);
- training and deployment of data collection agents in the field;
- realization of data collection;
- verification of completed questionnaires and start of data entry;
- writing the report.

#### 3.2 Sampling

The basis used for the sample was drawn from the list of beneficiary villages in the communes of Dogofry, Koronga and Guénéibé, in the Nara district of the region of Koulikoro.

The sample included 357 beneficiary households, 38 non-beneficiary households and several focus groups including groups of women, men, the technical services, traders and NGOs operating in the field.

In choosing the villages where the survey was to be carried out, the priority was to take into account all CFW activities as well as the training sessions on agro-ecology and nutrition carried out in the field. Villages selected by commune are listed in the attached table in annex. Focus groups were a representation of the stakeholders present in the different zones: men, women, technical services, management committees, non-beneficiaries and traders. The information collected from the various focus groups was synthesized to avoid unnecessary repetition, but retained relevant details reflecting relevant diversity and specificity for each locality.



### 3.3 Data collection

Data collection took place between April 24th and 30th 2014 in the communes of Dogofry, Koronga and Guénéibé. The field mission was made up of two teams, one in Nara for the communes of Koronga and Guénéibé, while the other team was in the commune of Dogofry. Each team included a supervisor and collection or survey agents. Their roles and responsibilities covered:

- **the supervisors** : charged with coordinating all the collection by their teams, ensuring proper presentation of the teams to the administrative and communal authorities; taking care that all questionnaires are correctly completed, and reading all the questionnaires; ensuring that each question is correctly understood and that all material is packed in an orderly way before leaving the village

- **the data collection or survey agents**: 22 agents in the commune of Dogofry, six in Koronga and six in Guénéibé, working two per village. This arrangement enabled rapid collection operations in all the selected villages.

## IV. PRESENTATION AND ANALYSIS OF FINDINGS

### 4.1 Characteristics of the beneficiaries

The beneficiaries who were interviewed were for the majority men, with 67.7% as compared with 32.3% women. The disparity between men and women's participation can be explained by two factors:

1. Men were the heads of selected households;
2. They make up the labor force that is most involved in realizing or rehabilitating the various infrastructure (deepening ponds, rural feeder roads, dams, fishponds, vaccination enclosures, etc.).

The commune of Dogofry which shows the highest rate of women beneficiaries interviewed—around 35%-- saw a higher mobilization and participation of women in project activities. As an illustration, the women of Ballé maintained public sanitation sites (mosques, market, the mayor's office, sub-prefecture, etc.) and participated in rehabilitating the rural feeder road.

### 4.2 Beneficiaries' Principal Activities and Sources of Income

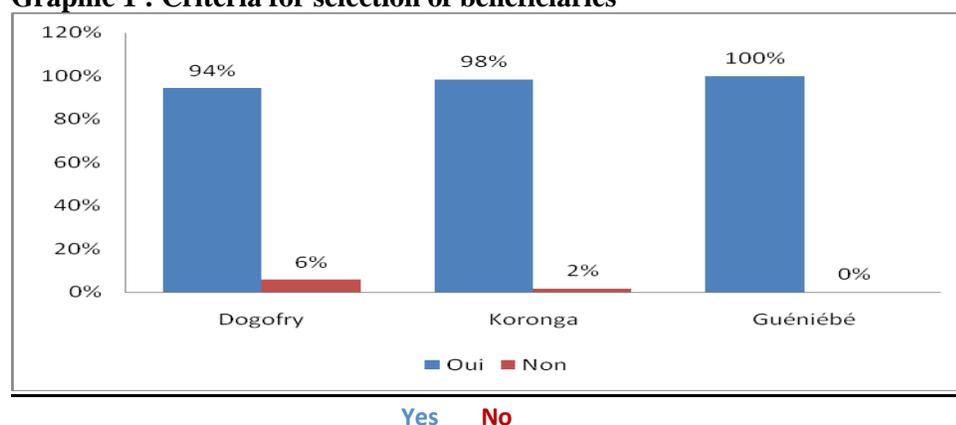
Agriculture is cited as the dominant activity in the three communes: 82% of the beneficiaries interviewed at Guénéibé, 74% at Koronga and 65% at Dogofry. After agriculture they are also involved in day labor, petty trade, sale of wood and handcrafts.

Agricultural production was the principal source of income in the communes: 51% of those interviewed at Dogofry, 31% at Koronga and 29% at Guénéibé. Despite their lower percentage of the income share, cash transfers, day labor and petty trade still played an important role.

### 4.3 Criteria for selection of Beneficiaries

As shown in Graphic 1, an average of 97.33% in the three communes judged application of the selection criteria to have been transparent. This rate is 100% in the commune of Guénéibé while at Dogofry and Koronga, on average 4% felt the application of the criteria was not transparent. According to them, better-off households benefited from DUWUTE at the expense of others that are more vulnerable and had greater need.

**Graphic 1 : Criteria for selection of beneficiaries**



In comparison, only 71% of non-beneficiaries interviewed thought the selection criteria were applied transparently, while the other 29% believed it was based on social status, personal merit, motivation of the beneficiary, enthusiasm for the project or the potential to be manual worker (for CFW activities). **It is concluded that the negative opinions can be attributed to poor diffusion of the selection criteria to all segments of the population.**



**Photo 1 : Dam for water retention**

#### **4.4 Knowledge of activities realized with CFW**

Among the numerous CFW activities, maintenance of rural feeder roads, vaccination enclosures and pastoral wells are the most frequently identified as examples of project infrastructure. However the most persons interviewed were well aware about a whole range of activities (Graphic 47 in annex).



**Photo 2 : Pastoral well at Palaly (commune of Dogofry)**

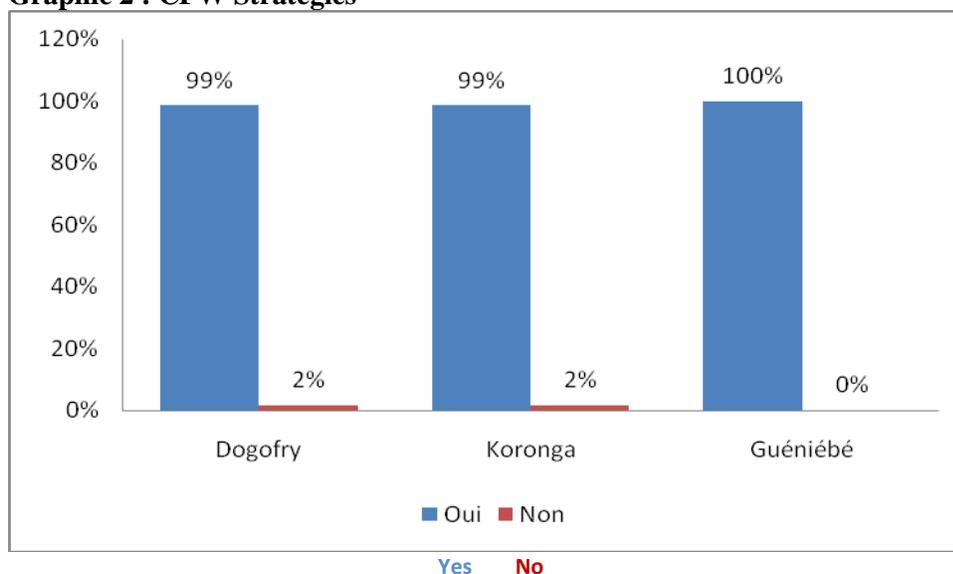
## 4.5 Analysis of Outcomes

### 4.5.1 Cash for Work (CFW)

#### a. Relevance

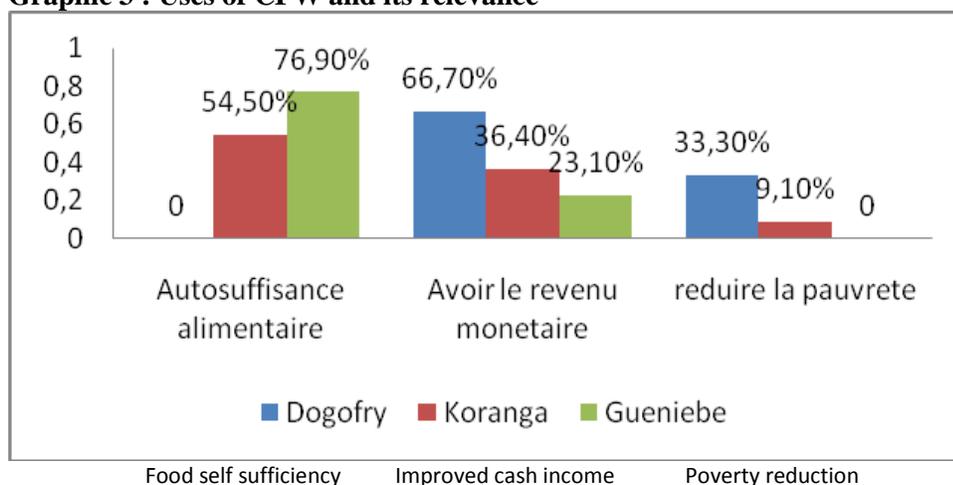
For virtually all the beneficiaries interviewed, as indicated by Graphic 2, CFW was an appropriate strategy as part of households' resilience to food shocks and costly expenses: health, education, clothing, marriage, taxes, etc.

**Graphic 2 : CFW Strategies**



In all three communes, an average of 92% non-beneficiary households saw CFW as an effective means to strengthen households' resiliency against food shocks. In their opinion, CFW improved food security and reduced poverty through access to additional/higher income.

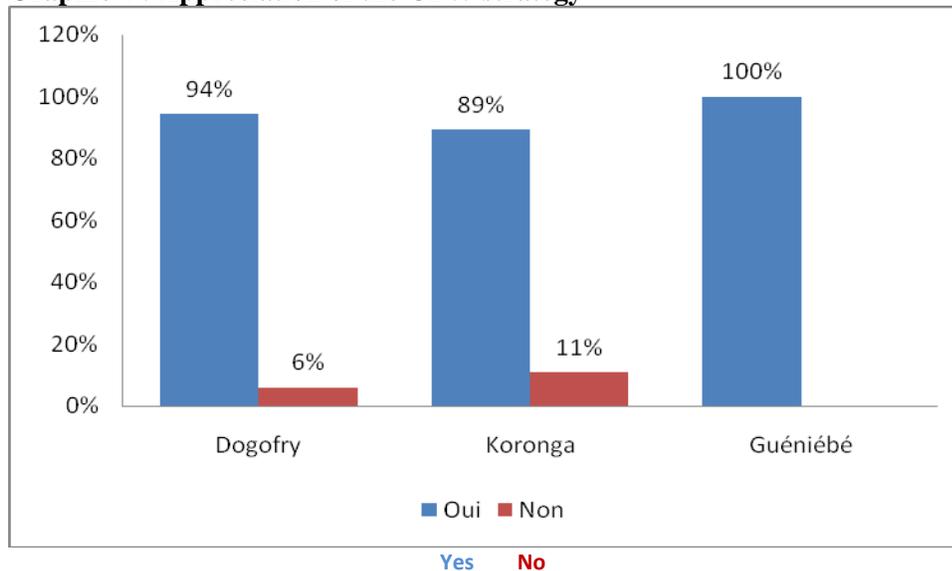
**Graphic 3 : Uses of CFW and its relevance**



## b. Opinions from beneficiaries on CFW

The beneficiaries interviewed were virtually unanimous concerning the project's relevance. The positive appreciation of the project ranged from 89% at Koronga to 100% at Guéniébé.

**Graphic 4 : Appreciation of the CFW strategy**



All project components were judged very positively by the focus groups who emphasized that CFW facilitated:

- improvement of communities' living conditions (access to food, health, education and clothing);
- realization or rehabilitation of infrastructure;
- production of vegetables from November through February, because of availability of water ;
- public sanitation;
- establishing national identity cards;
- payment of taxes;
- strengthening the autonomy and authority of heads of households;
- reducing indebtedness;
- strengthening social cohesion;
- strengthening team spirit for collective work;
- improving villages' technical and organizational capacities;
- better understanding of environmental issues (causes of soil degradation, measures for restoration).

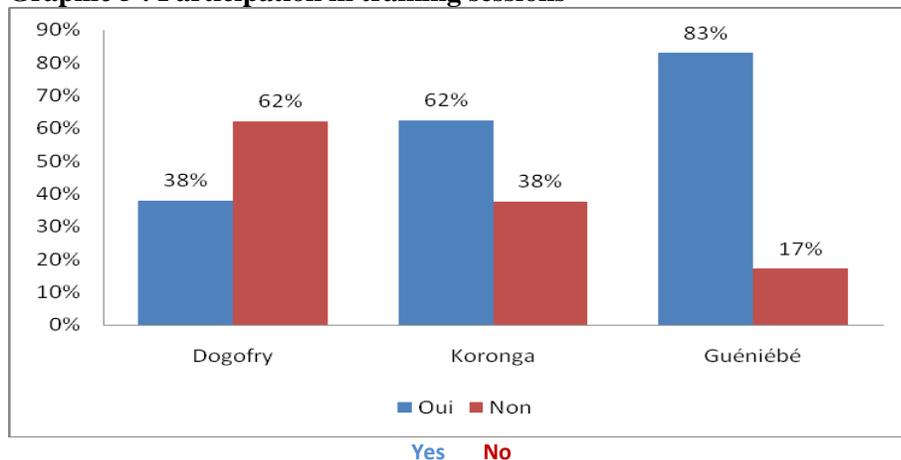
### 4.5.2 Training sessions

#### 4.5.2.1 Agro-ecology



Analysis of Graphic 5 shows that an average of 39% of beneficiaries surveyed had not participated in the training on agricultural production practices. Disturbingly in Dogofry, this number rose to 62%.

**Graphic 5 : Participation in training sessions**

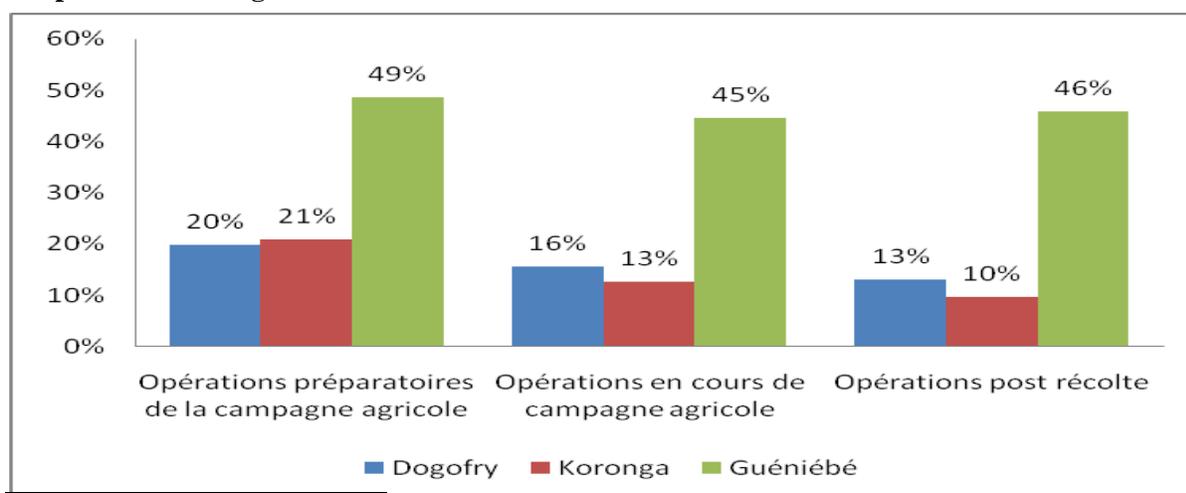


### a. Training Module

The modules for agro-ecology training sessions covered pre-growing season operations (techniques for composting, agro-forestry, management of animals); operations during the growing season (techniques of weeding/hoeing, water conservation, thinning out after germination); and post-harvest tasks (techniques for improved storage, and vegetable production).<sup>1</sup>

The highest rate of participation in agro-ecology training sessions was recorded in Guéniébé where it varied between 49% and 46% of the interviewed population (Graphic 6).

**Graphic 6 : Training Modules**

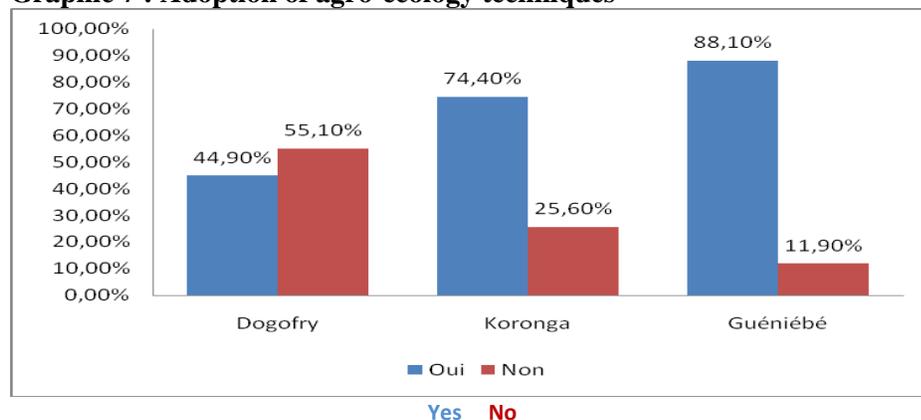


<sup>1</sup> Evaluation report on Training sessions organized by EFSP/DUWUTE project, CRS, October 2013.

### b. Adoption of agro-ecology techniques

Adoption rates of production techniques greatly varied. At Guénéibé, there was an 88% reported rate while Dogofry was significantly lower at 44%. It should be noted that certain techniques (agro-forestry, animal management, techniques for weeding/hoeing, thinning out after germination) were already applied in the area. The new trainings are assumed to have reinforced beneficiaries' technical capacities.

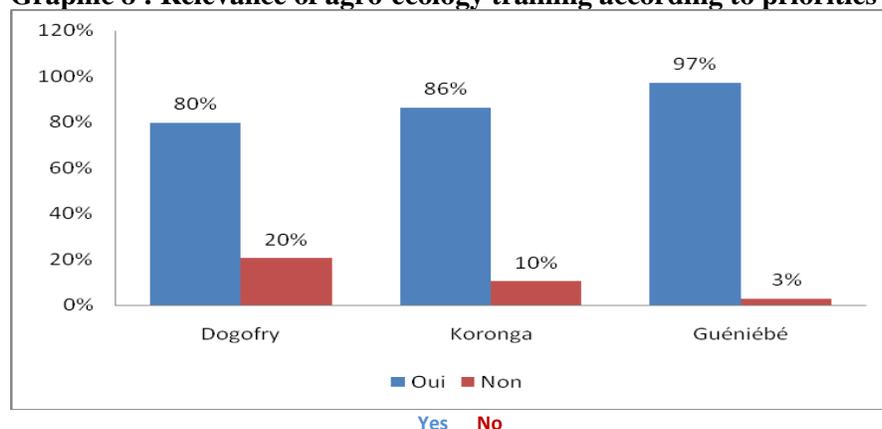
**Graphic 7 : Adoption of agro-ecology techniques**



### c. Relevance of the training

According to target groups interviewed, the agro-ecology trainings were felt to be extremely pertinent because they focused on mastering the agricultural techniques, increasing production and productivity, food self-sufficiency and awareness of natural resource management (Graphic 8).

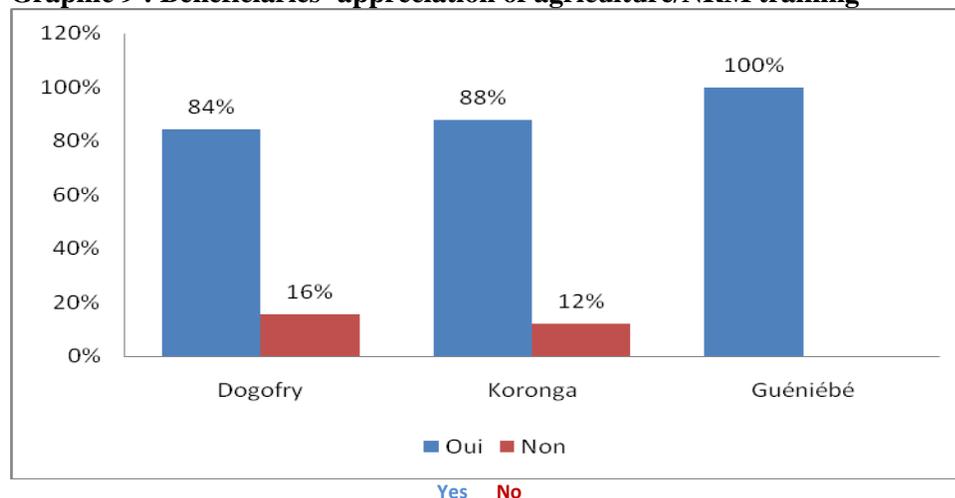
**Graphic 8 : Relevance of agro-ecology training according to priorities**



### d. Beneficiaries' opinions of trainings on agriculture/NRM

Graphic 9 shows that an average of 86% of beneficiary households in the communes of Koronga and Dogofry were satisfied with the agriculture/NRM training. In the commune of Guéniébé the satisfaction rate was 100%.

**Graphic 9 : Beneficiaries' appreciation of agriculture/NRM training**



#### 4.5.2.2 Nutrition

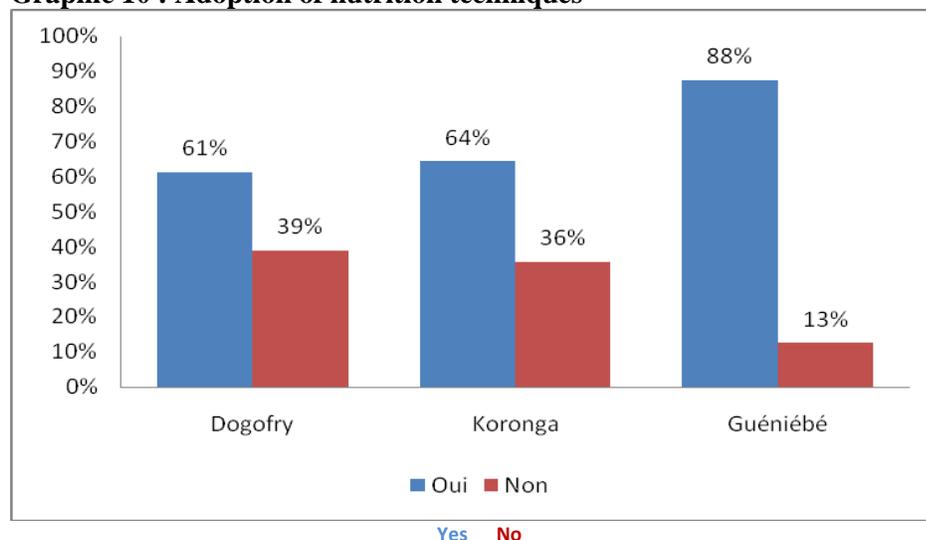
Women were the primary target group for the trainings on nutrition.

##### a. Adoption of Nutrition Techniques

With regard to adoption of nutritional techniques, the new food techniques learnt during the training sessions are applied in 66% of beneficiary households.

These rates are considerable when it is recalled that this is an impoverished zone, access to food is difficult, poverty is widespread and the majority of the population is not literate.

**Graphic 10 : Adoption of nutrition techniques**

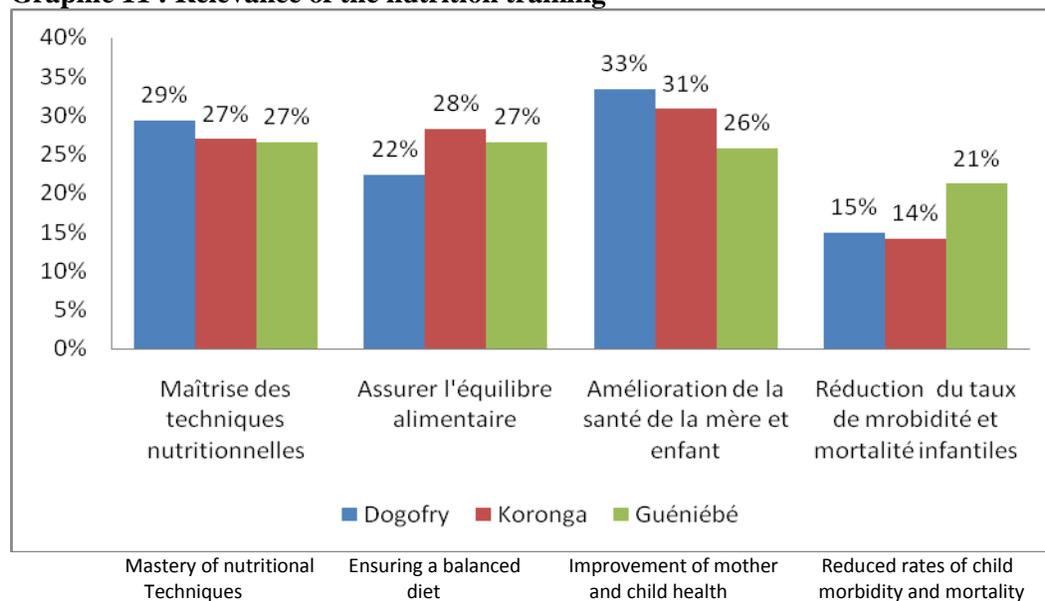


### b. Relevance of the nutrition training

On average, 87% beneficiaries found the trainings on improved food techniques to be an appropriate strategy to assist household to become more resilient to unpredictable food-related shocks. These opinions were shared by 86% at Dogofry; 87% at Koronga and 92% at Guénéibé (Graphic 50 in annex).

The interviewees stated that the nutritional trainings helped them create a more balanced diet, improved mother and child health and reduced malnutrition, child morbidity and mortality (Graphic 11). The interviewees were asked to select one theme which they found the most impactful or applicable to their lives (multiple response options were not allowed).

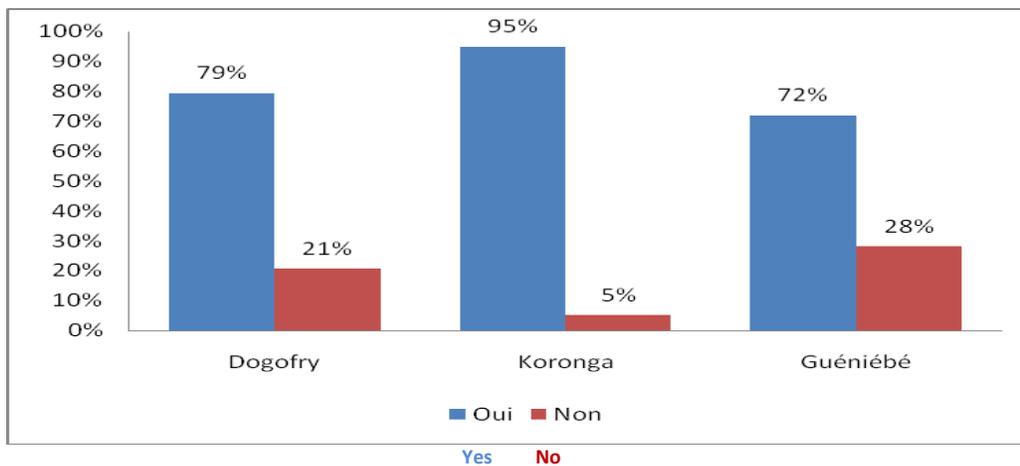
**Graphic 11 : Relevance of the nutrition training**



### c. Beneficiaries' appreciation of the training in nutrition

Overall the training in nutrition is judged relevant and effective (Graphic 12).

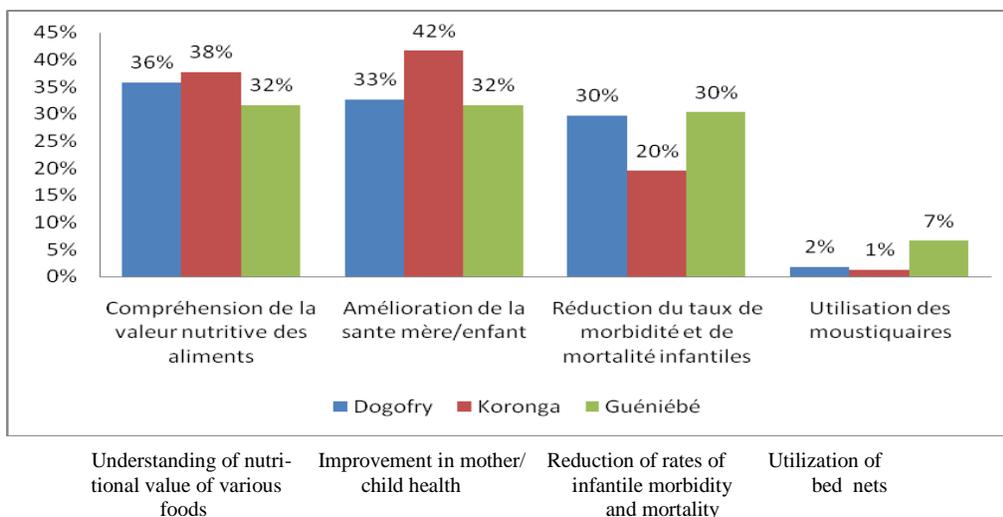
**Graphic 12 : Beneficiaries' opinion of training in nutrition**



Analysis of Graphic 13<sup>2</sup> shows that the training in nutrition was relevant and effective because:

- 35% of beneficiary households saw the main relevance of the training to be improvement in their understanding of the nutritive value of various foods;
- 35% indicated that the most important aspect of the training was an improvement in mother/child health;
- 26% believed the greatest benefit of this training was that it facilitated a reduction in rates of infantile morbidity and mortality;
- Use of insecticide-treated bed nets was mentioned as a complementary behavior to nutritional practices regarding mother and child health.

**Graphic 13 : Beneficiaries' appreciation of nutritional training**



<sup>2</sup> The interviewees were asked to choose one theme which they found the most impactful or applicable to their lives (multiple response options were not allowed).

### 4.5.3 Access to food

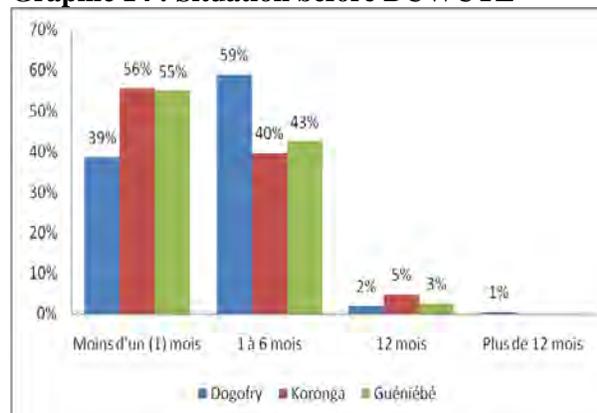
#### 4.5.3.1 Food situation before and after the DUWUTE project

A combination of factors such as inadequate rainfall, access to agricultural inputs, and the impact of insect attacks on crop causes significant food insecurity in the target zone, though less so after DUWUTE intervention. Furthermore it is anticipated that as beneficiaries continue to apply the improved agricultural techniques learned during the project—and demonstrate their value to others—then the overall outlook should improve.

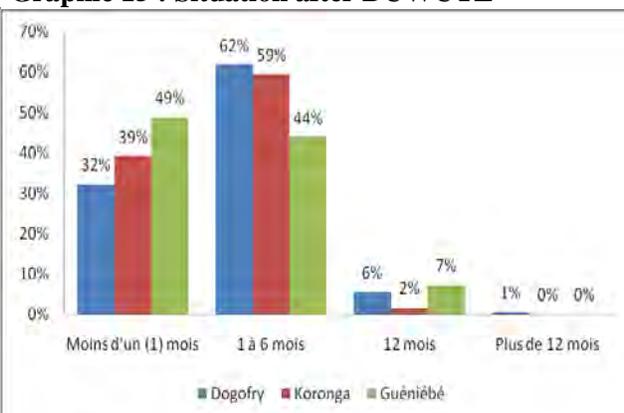
In comparing the pre- and post-intervention food situations, beneficiaries spoke of a clear improvement, with more households experiencing more number of food secure month:

- the number of beneficiaries with access to less than one month's food stocks fell in the 3 communes after the project;
- the number of beneficiaries with access to more than 1 to 6 months' food stocks increased in the 3 communes.
- Household access to food for 12 months increased two- to three-fold in Dogofry and Guéniébé, but decreased slightly Koronga.

Graphic 14 : Situation before DUWUTE



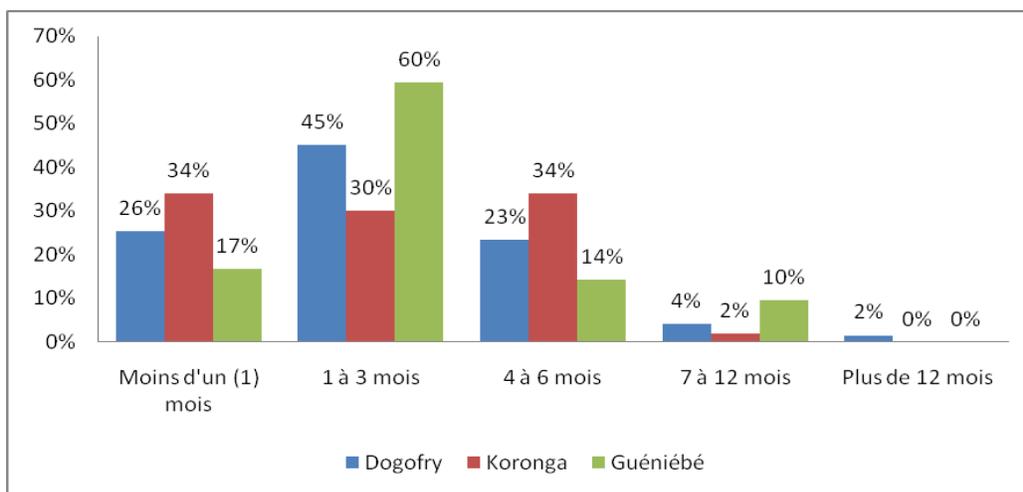
Graphic 15 : Situation after DUWUTE



### 4.5.4 Management of cereal stocks

Management of cereal stocks, key to strong household food security, continued to be a challenge. One of the reasons for this situation was the poor agricultural season in 2013. CFW was a source of income that protected many households from the need for immediate sale their meagre harvests.

Graphic 16 : Management of Cereal stocks



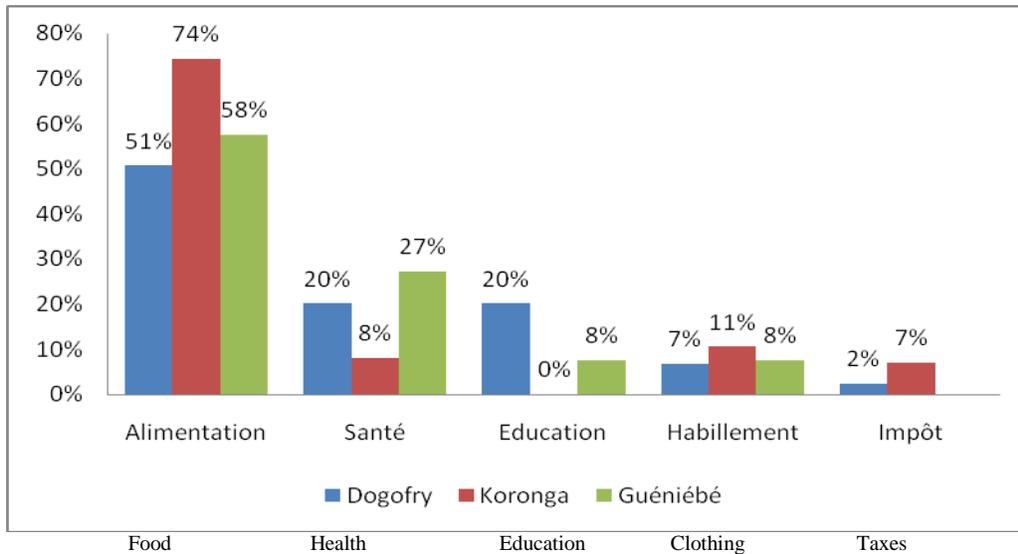
**Photo 3 : A cereal bank**

#### **4.5.5 Utilization by the households of money received from CFW**

It was noted that 90% of beneficiary households' income from the CFW schemes was typically spent on food, health and education, with food accounting of the majority of investing.

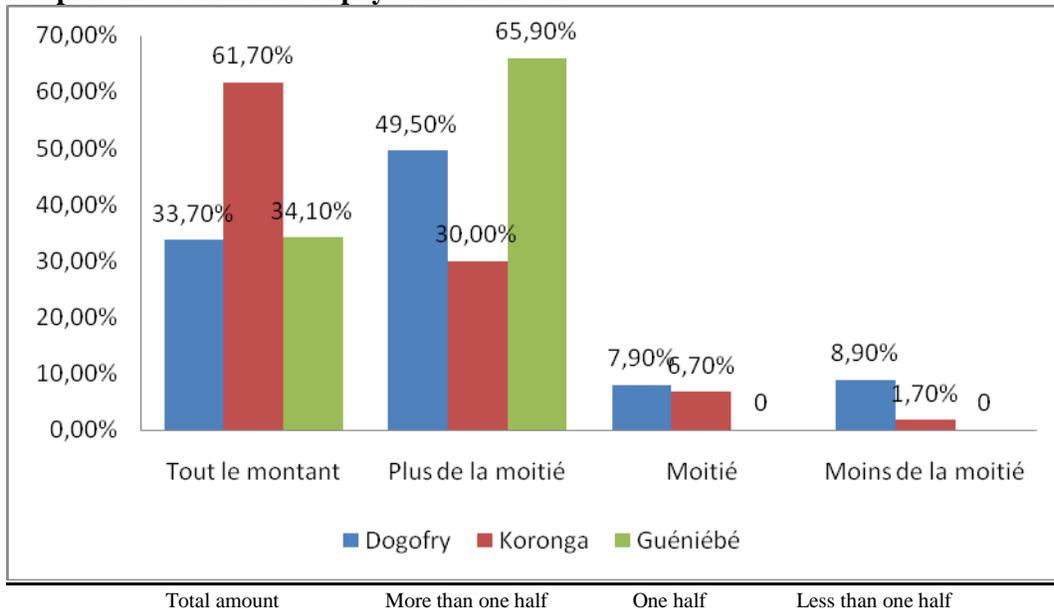
#### **Graphic 17 : Households' utilization of money received from CFW**





The data collected indicates that the beneficiaries spent more than half to all their income from CFW. Coupled with the Graphic 17 above, these are strong gauges of the high, at times precarious, food insecure state of the beneficiaries.

**Graphic 18 : Utilization of payments from CFW**



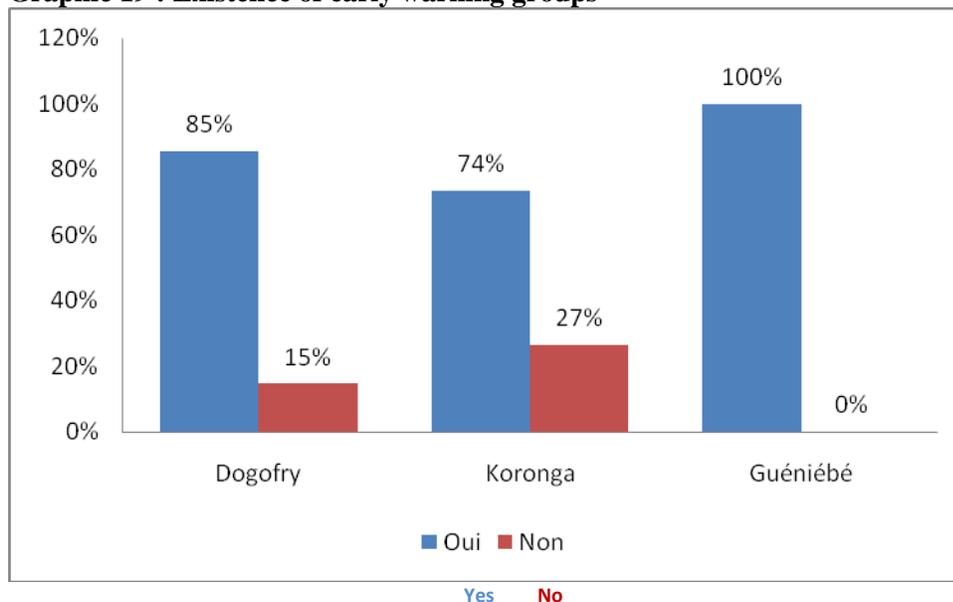
Among surveyed beneficiaries, a few mentioned that they received less than the intended 1000Fcfa/day, being victims of theft by the local management committee. This situation was raised in the villages of Ballé and Mounta, in Dogofry commune. An inquiry was launched but the accusations could not be confirmed.

## 4.5.6 Early Warning Groups

### a. Existence of the GAPRU

Throughout the zone, thanks to project awareness raising actions, 85% of the surveyed beneficiaries at Dogofry, 74% at Koronga and 100% at Guéniébé are aware of the existence of the GAPRU (the French name of early warning groups) as a data collection and information system.

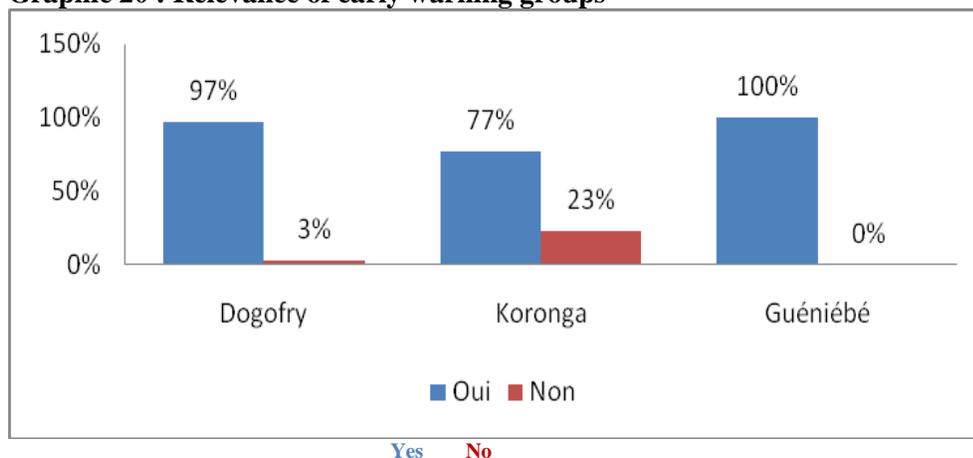
**Graphic 19 : Existence of early warning groups**



### b. Relevance of the Early Warning Groups

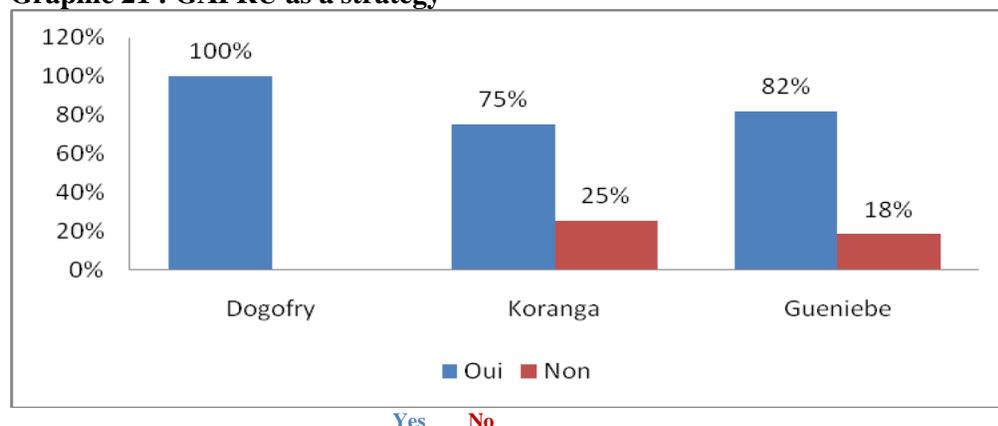
Most beneficiaries believed that these early warning groups served a positive function as part of an integrated strategy to households' ability to resist food shocks.

**Graphic 20 : Relevance of early warning groups**



Similarly the majority of non-beneficiaries interviewed viewed the establishment of early warning groups as appropriate strategy to support household resiliency.

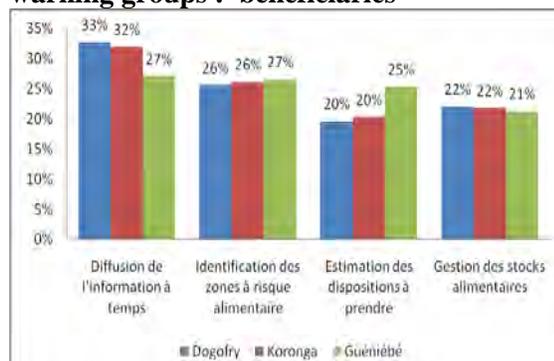
**Graphic 21 : GAPRU as a strategy**



### c. Usefulness of the Early Warning Groups

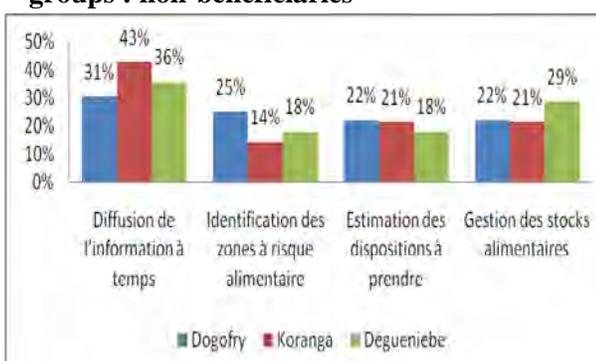
As proof of the relevance of the early warning groups, the beneficiaries cited benefits such as: their diffusion of timely information, identification of zones at risk concerning food security, management of food stocks and measures to be taken concerning markets. The non-beneficiaries generally agreed and found the diffusion of information appeared to be the priority in terms of usefulness.

**Graphic 22<sup>3</sup> : Useful functions of early warning groups : beneficiaries**



Timely information diffused      Identifying Zones at risk      Estimating measures to take      Management of food stocks

**Graphic 23<sup>4</sup> : Useful functions of early warning groups : non-beneficiaries**



Timely information diffused      Identifying Zones at risk      Estimating measures to take      Management of food stocks

<sup>3</sup> The interviewees were asked to choose one theme which they found the most impactful or applicable to their lives (multiple response options were not allowed).

<sup>4</sup> The interviewees were asked to choose one theme which they found the most impactful or applicable to their lives (multiple response options were not allowed).

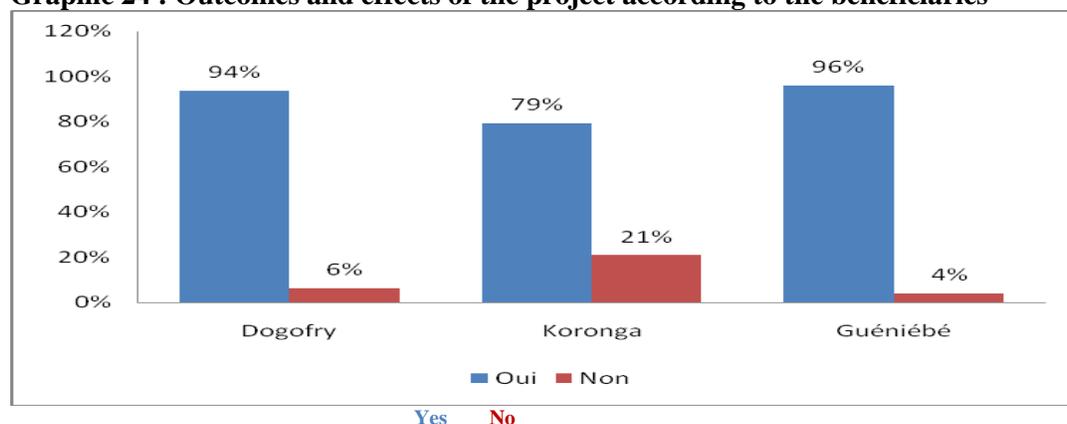
#### d. Framework for GAPRU collaboration

Beneficiary households surveyed stated that the early warning groups should also take part in collaboration meetings with the local technical services to share information and coordinate messaging on key themes.

#### 4.5.7 Outcomes and effects of the Project

Across the target communes, 91% of the beneficiaries believed that project activities and associated strategies have had positive effects on households' capacity to respond to shocks and natural disasters. It was the highest at Guéniébé (96%).

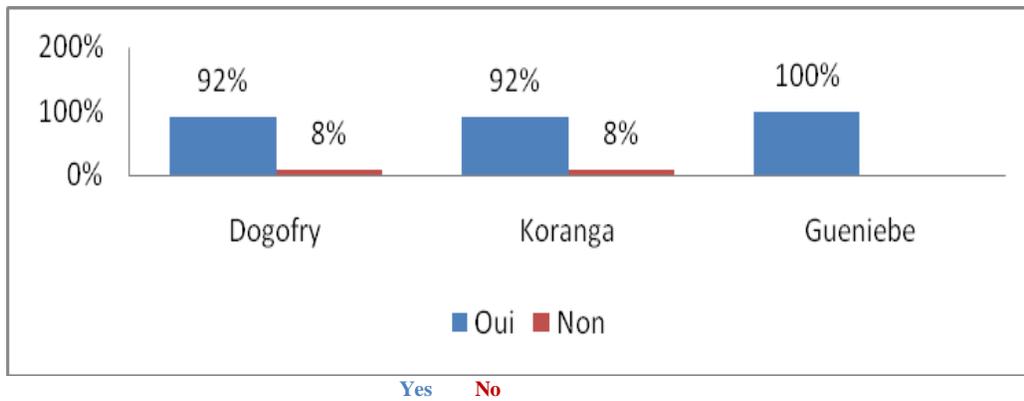
**Graphic 24 : Outcomes and effects of the project according to the beneficiaries**



The beneficiaries recognize unanimously that the project has produced many solid outcomes such as higher awareness of and capacity to respond to shocks and natural disasters, introduction to NRM, management of food stocks, to nutritional techniques and the creation of employment.

On the whole, the DUWUTE project has produced positive impacts according to 94% of non-beneficiaries.

**Graphic 25 : Outcomes and effects of the project according to Non- beneficiaries**



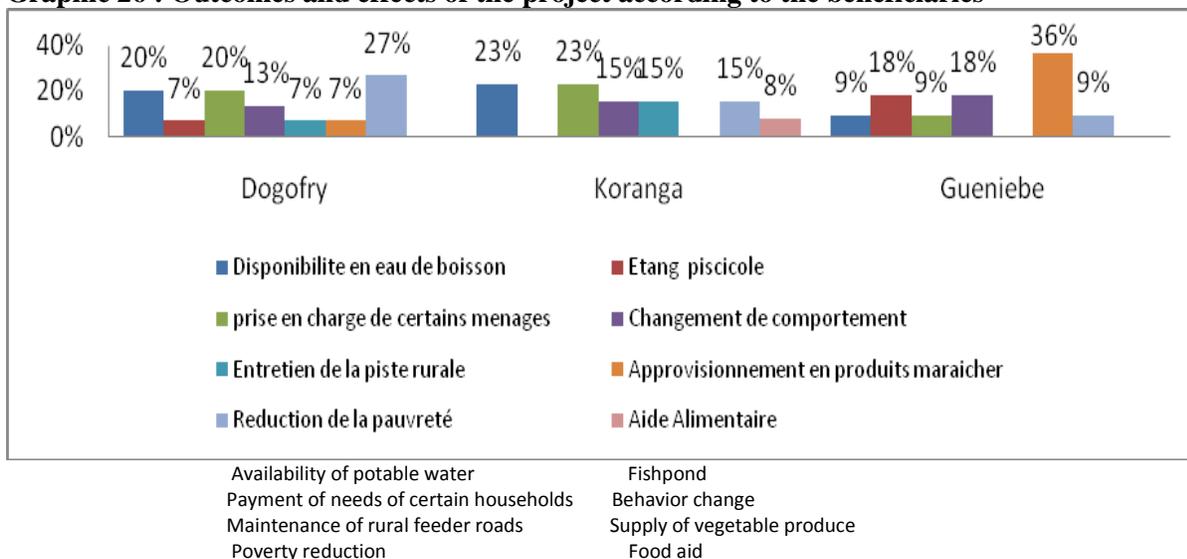
Among the positive outcomes and effects, according to non-beneficiaries surveyed, was the augmentation of the availability of potable water at Ballé in the commune of Dogofry. Prior to the project, the villagers had to wait three days to access the only well. This was cut down to one.

Other outcome of the project highlighted by non-beneficiaries included:

- establishment of a fishpond, an activity previously unknown in this zone;
- nutritional behavior improved through diversification of food varieties;
- development and maintenance of rural feeder roads; and
- increased supply of vegetable produce.

The following graphic is the illustration of this analysis.

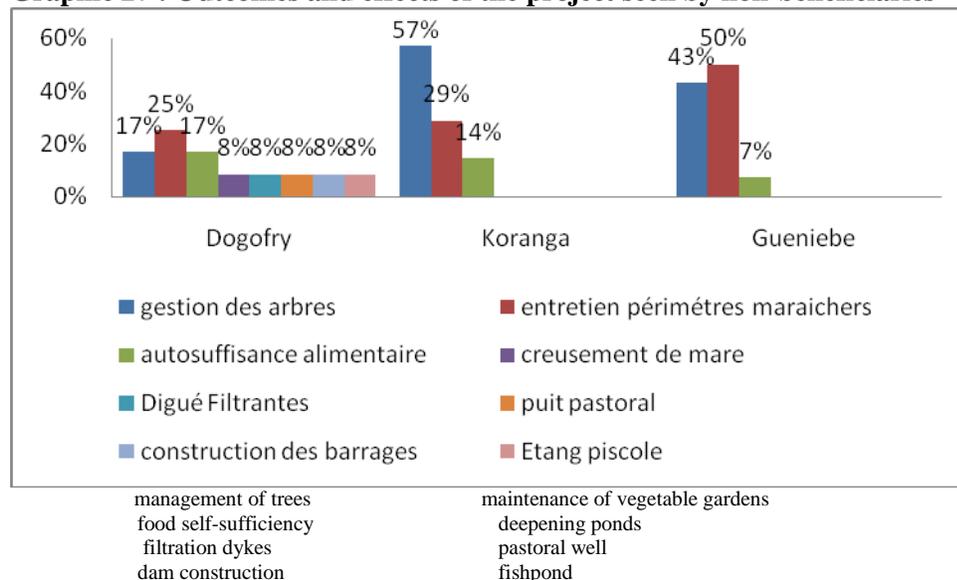
**Graphic 26 : Outcomes and effects of the project according to the beneficiaries**



Non-beneficiaries identified an array of positive impacts resulting from DUWUTE's implementation, with particular appreciation of the pond and marshland rehabilitation. These led

to unanticipated spillover consequences where the construction of dams and filter dykes contributed to raising the water table and to longer operational periods for pastoral wells.

**Graphic 27 : Outcomes and effects of the project seen by non-beneficiaries**



Focus groups, for their part, concurred with the other interviewees. The stakeholders (NGOs, technical services, local authorities) selected the following results of note stemming from the project:

- improvement of the communities' living conditions ;
- improvement of the communities' organizational capacity;
- realization of infrastructure;
- access to potable water thanks to raising the water table ;
- amelioration of sanitation;
- care for cases of malnutrition;
- improvement in mother/child health;
- ability to acquire a national identity card;
- capacity to pay taxes.

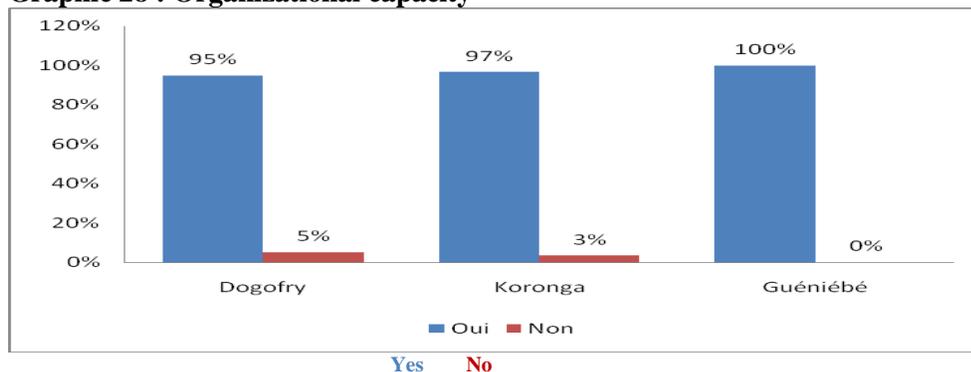
The local traditional and political leaders (village chief, imam, mayor) recognize numerous community and household benefits:

- satisfactory supply of the markets in food stocks;
- strengthening resilience to food and nutritional shocks;
- strengthening communities' organizational capacities;
- strengthening social cohesion and household stability;
- access to potable water;
- reducing migration.

## 4.5.8 Community organization

The DUWUTE project played a substantial role in the improvement of the target communities' capacity of mobilize and organize around shared interests. Guénéibé and Koronga are the two communes which exhibited the most significant capacity. These groups have contributed to strengthening solidarity.

**Graphic 28 : Organizational capacity**



## 4.5.9 The market

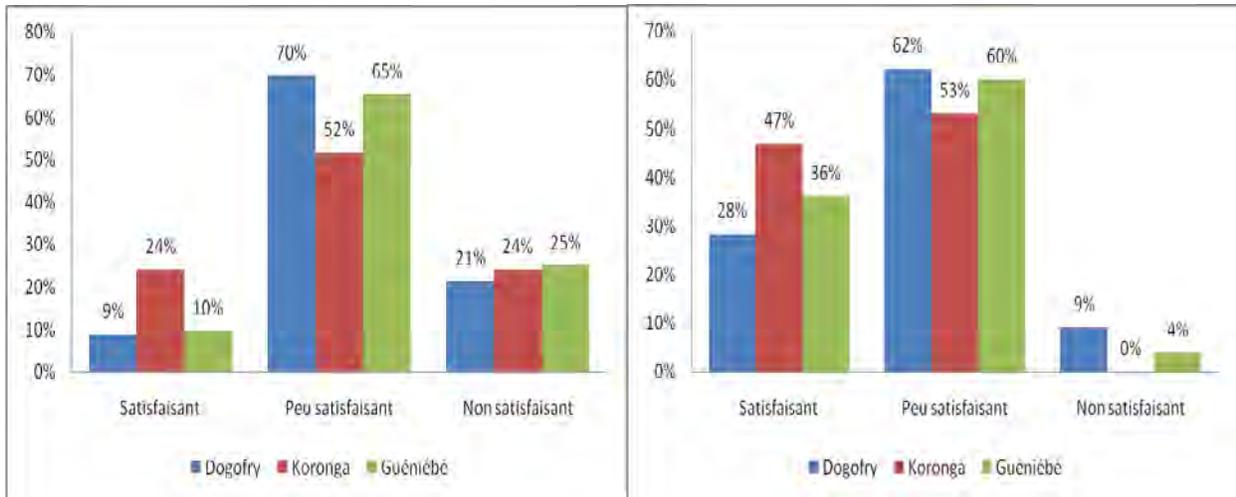
### a. Situation and source of supply before and after DUWUTE

On average, the situation of market supply before the project was judged to be fairly poor according a large percentage of the beneficiaries interviewed, with only 14% who determined the market to offer ample quantities and diversity of food options (Graphic 29). The mediocre market was due in part to a weak agricultural performance the previous season.

After implementation of the project, there was a sizeable increase in the percentage of households reporting that the markets were more satisfactory while those finding them unsatisfactory decreased dramatically.

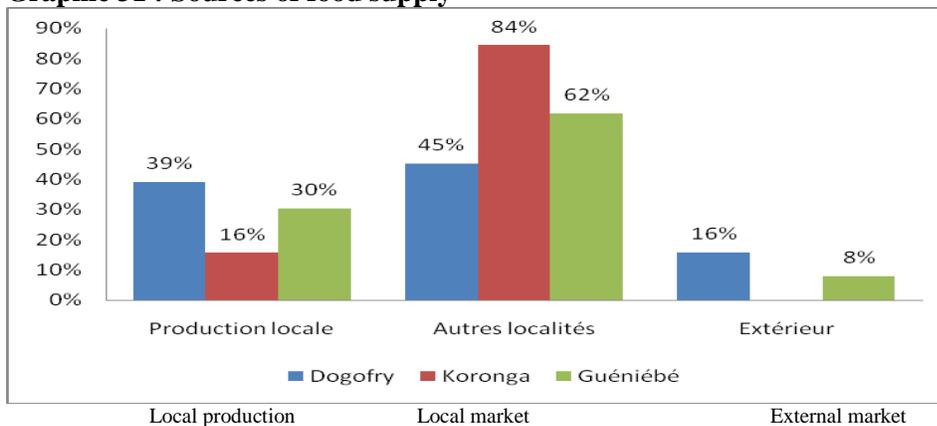
**Graphic 29 : Situation of market supply before the project**

**Graphic 30 : Situation of market supply after the project**



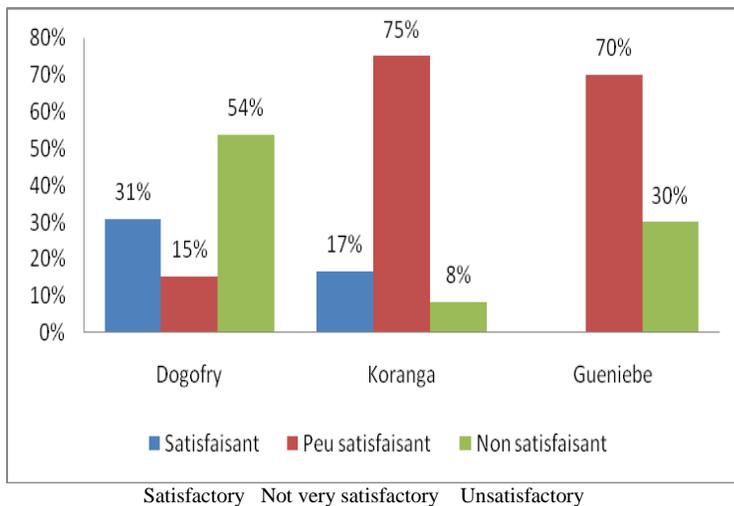
The food sources for household consumption are the local markets, local production and external markets. Households across the three communes cited the local markets as their primary supply of food (Graphic 31).

**Graphic 31 : Sources of food supply**



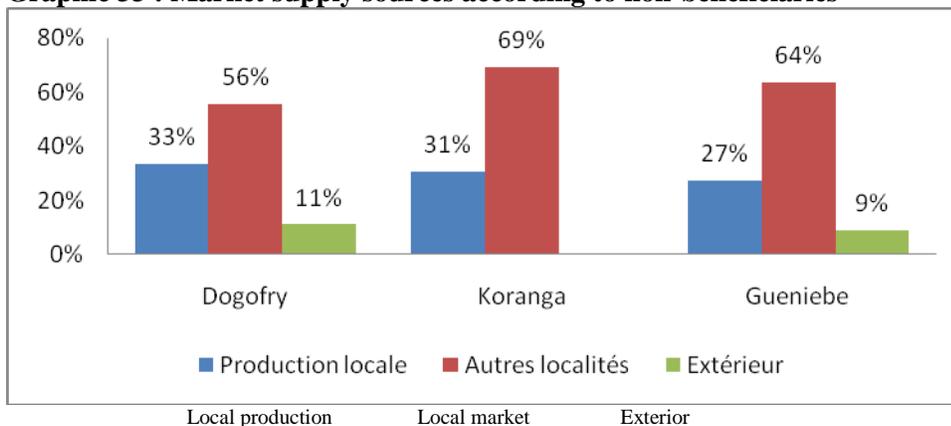
For the non-beneficiaries, the supply situation for the markets was not very satisfactory before the arrival of the DUWUTE project (Graphic 32).

**Graphic 32 : Market supply situation according to non-beneficiaries**



As with beneficiary households, non-beneficiary households accessed the majority at local market (Graphic 33).

**Graphic 33 : Market supply sources according to non-beneficiaries**

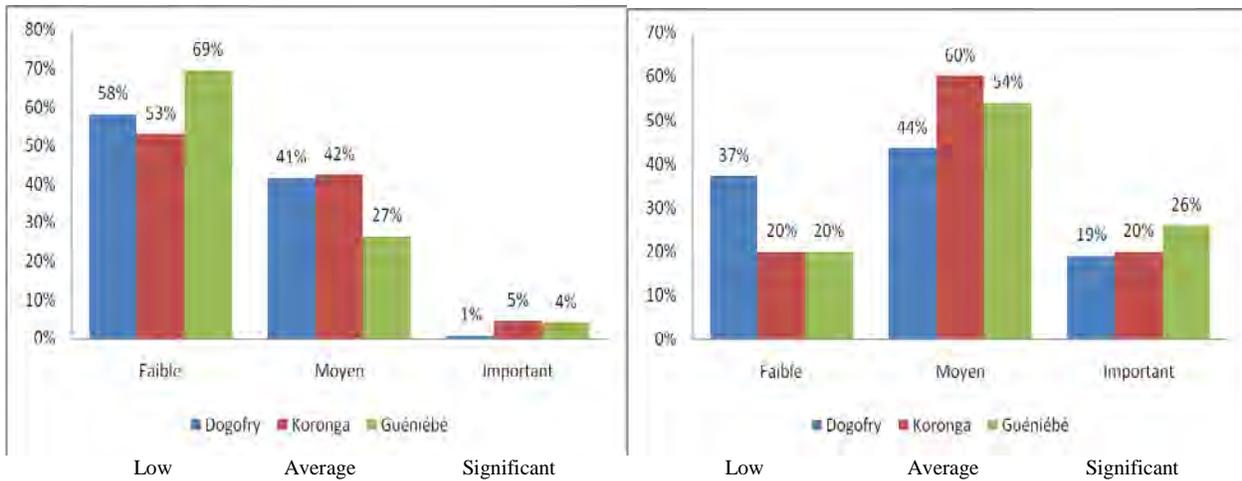


### **b. Level of stocks and prices before and after DUWUTE**

Food stocks were low before the arrival of the project, according to the beneficiaries. On average, 60% of the interviewees found the food stock weak, with 37% found them acceptable though not strong, and only 3% thought of them a strong. After DUWUTE, beneficiary households judged the level of stocks as having significantly improved. There was more than a 100% decrease in those who viewed the food stocks as weak, down to 25% on average. Those who estimated the stocks as accept but not strong increased by 15% to 52%, while the beneficiaries who judged the stocks as strong jumped to 22% (Graphics 34 and 35).

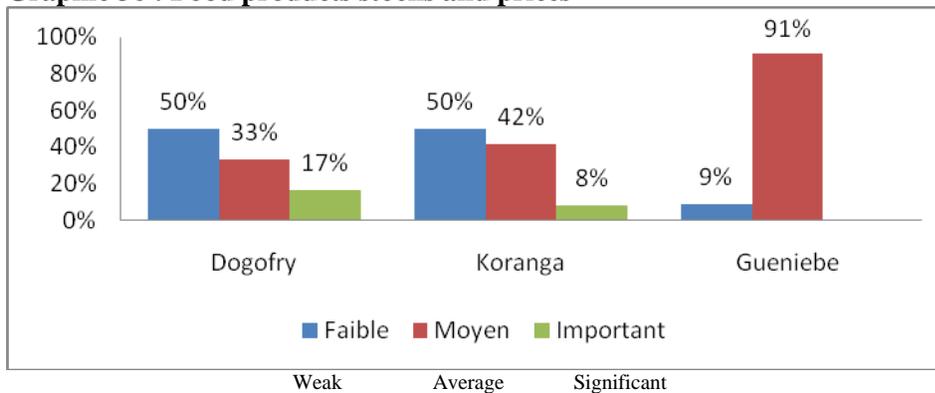
**Graphic 34 : Level of stocks before DUWUTE**

**Graphic 35 : Level of stocks after DUWUTE**



For the non-beneficiaries, the level of stocks was qualified as average across the three communes. The opinion was the strongest at Guéniebé at 91%.

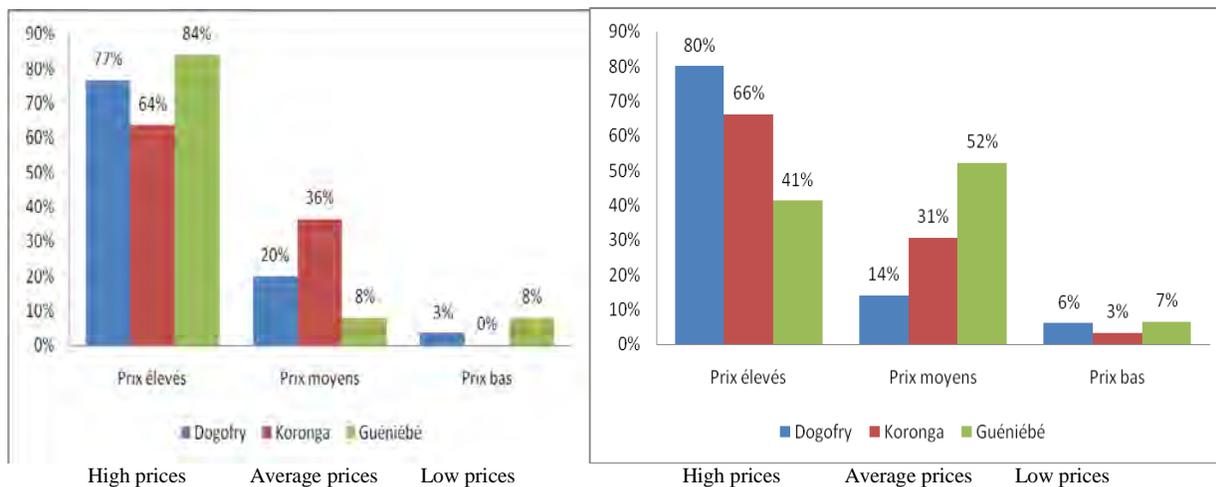
**Graphic 36 : Food products stocks and prices**



In comparing the periods, the percentage stating food prices were high was greater for the period before DUWUTE than for after the project. However it diverged greatly by commune, with Guéniebé seeing the strongest perceived improvement in terms of food prices. For the other communes, it was more inconclusive (Graphics 37 and 38).

**Graphic 37 : Price situation before DUWUTE**

**Graphic 38 : Price situation after DUWUTE**



#### 4.5.10 State of Infrastructures

Almost all infrastructures were operational. The pastoral well and fishpond at Mouna in the Dogofry commune were not complete at the time of the evaluation.

#### 4.5.11 Management of infrastructures

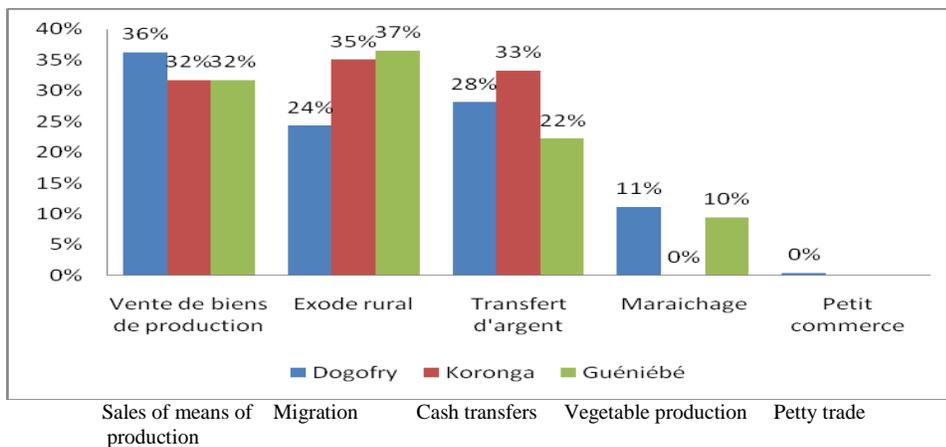
Providing continual maintenance is the key to sustainable management and functioning of infrastructure. This upkeep is the chief responsibility of the various management committees in the beneficiary communes. An infrastructure management committee was not established in the village of Guéniébè at the time of the evaluation.

#### 4.5.12 Strategy in response to inadequate rainfall in 2013

Beneficiaries used an array of coping strategies to counter the poor rain season in 2013. The three most common—sold means of production, youth migration, and cash transfers from relatives and friends—were employed fairly equally in the communes. Vegetable gardens were the least favored response. Youth migration is extremely disruptive to the local communities, while selling farming implements and animals is very negative coping strategy as it leaves the households worse off in the end and further entrenches them in a poverty cycle.

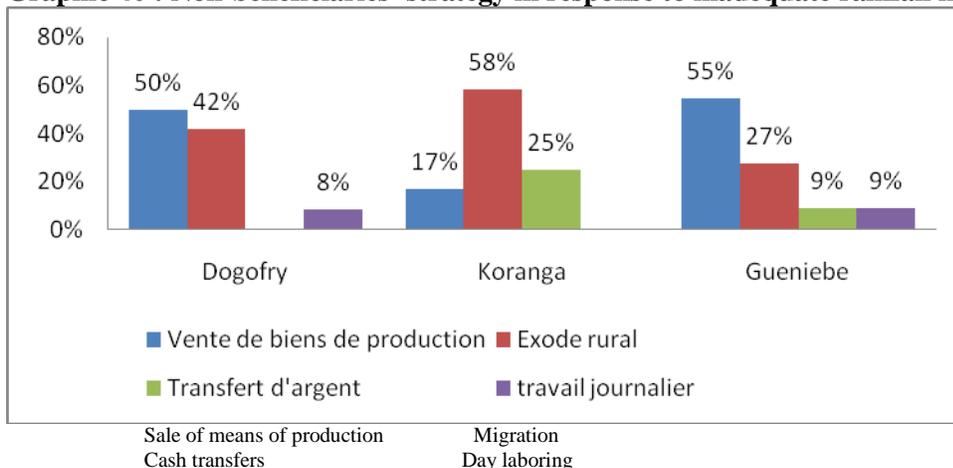
#### Graphic 39<sup>5</sup> : Beneficiaries' strategy in response to inadequate rainfall in 2013

<sup>5</sup> The interviewees were asked to choose one theme which they found the most impactful or applicable to their lives (multiple response options were not allowed).



The non-beneficiaries faced similar circumstance and applied comparable coping strategies. Here as well, the primary responses were to sell means of production and youth migration, indicating a wide-spread and worrying problem.

**Graphic 40 : Non-beneficiaries’ strategy in response to inadequate rainfall in 2013**



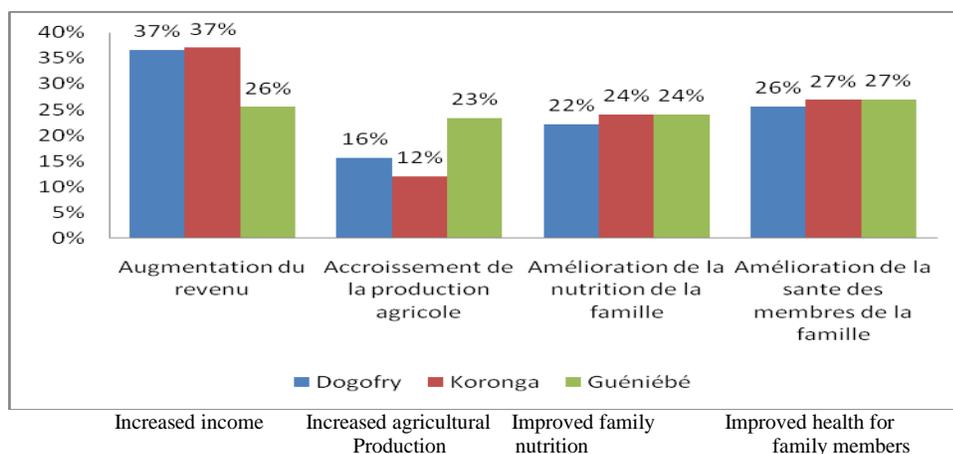
#### 4.5.13 Socio-economic situation after the DUWUTE project

According to the beneficiaries, the socio-economic situation after the project is characterized by:

- an increase in their household income;
- an increase in their production;
- an improvement in household nutrition;
- and the overall health improvement of their family members.

**Graphic 41<sup>6</sup> : Socio-economic situation after the DUWUTE project**

<sup>6</sup> The interviewees were asked to choose one theme which they found the most impactful or applicable to their lives (multiple response options were not allowed).



### For the focus groups

According to the focus groups, the socio-economic situation of beneficiaries prior to the project was characterized by:

- marked household vulnerability because of their poverty;
- weak purchasing power;
- economic instability and indebtedness;
- poor health cover;
- difficulty access to water;
- vulnerability in the face of food shocks;
- dependence and loss of credibility;
- social cohesion and household stability are affected;
- reduced school enrolment of children, particularly girls;
- interrupted school attendance by children, particularly girls who are exposed to underage marriage;
- pressure to migrate.

After the project, the socio-economic situation of beneficiary zones was distinguished by:

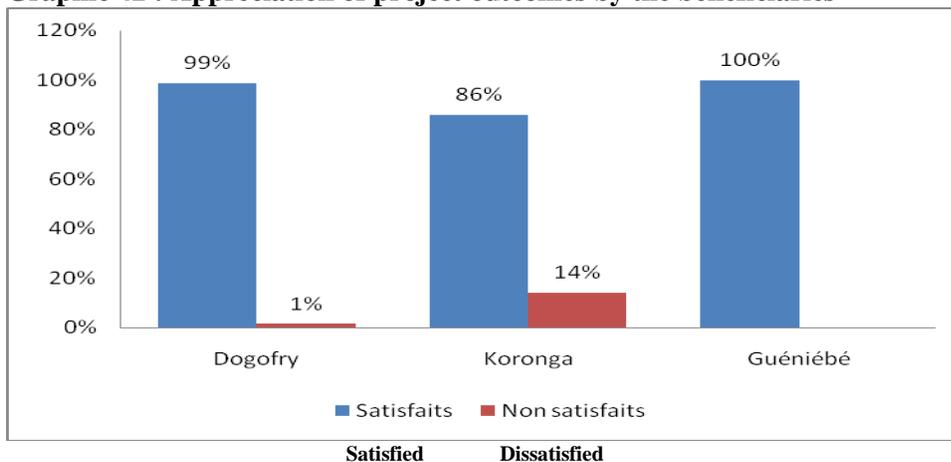
- improvement in the communities' living conditions;
- realization or rehabilitation of infrastructures ;
- diversified sources of income;
- increased income for households;
- improved purchasing power;
- strengthened solvency;
- satisfactory supply of markets with food stocks ;
- strengthened resilience in the face of food and nutritional shocks;
- improvement of mother-child health;
- improvement of access to potable water;
- village sanitation;
- building autonomy and credibility;
- satisfaction of the need for social consideration;

- strengthened social cohesion and household stability;
- reduced migration.

#### 4.5.14 Appreciation of project outcomes

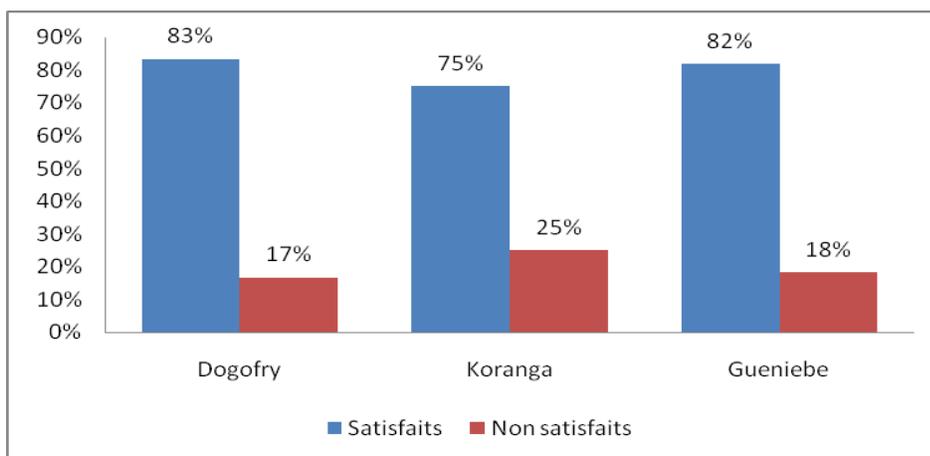
Surveyed beneficiaries were almost unanimous in expressing satisfaction with the DUWUTE project.

**Graphic 42 : Appreciation of project outcomes by the beneficiaries**



On average, 80% of non-beneficiary households interviewed from the target zones were satisfied with the outcomes of the DUWUTE project.

**Graphic 43 : Opinion of project outcomes by non-beneficiaries**



The project elements and impacts were highly valued by the focus groups, especially CFW. They stressed that CFW had facilitated:

- improved living conditions for the communities (with access to food, to health, education and clothing) ;
- establishment or rehabilitation of needed infrastructures ;
- vegetable production increased from November through February;
- stronger awareness of and application of public sanitation issues;
- obtaining national identity cards;
- payment of taxes ;
- reinforcement of the autonomy and authority of heads of households;
- strengthened solvency;
- strengthened social cohesion;
- strengthened team spirit and collective work ;
- villages' improved technical organizational skills ;
- good understanding of environmental issues (causes of soil degradation, measures for restoration).

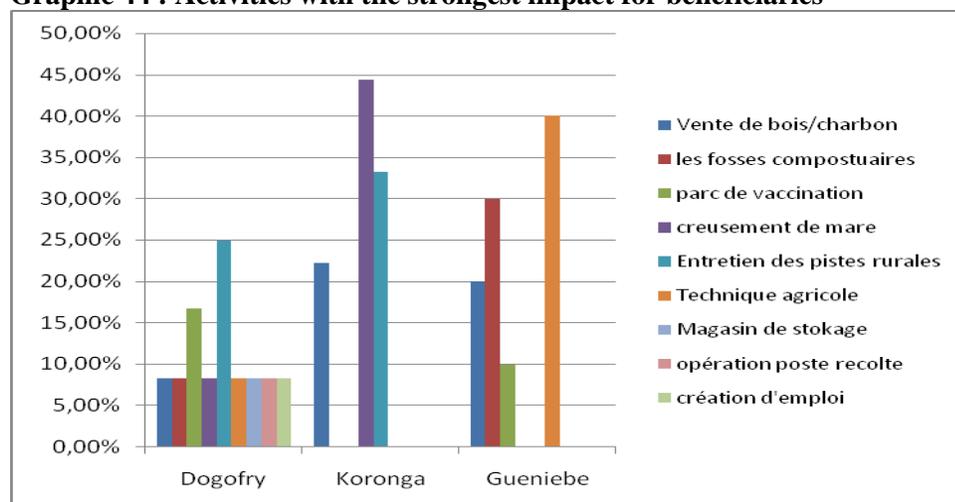


**Photo 4 : Scene of celebration among beneficiaries**

#### **4.5.15 Impact of activities implemented on the populations' resilience**

The activities implemented that have a positive impact on the resilience of the target population are presented in Graphic 44. The activities which the beneficiaries appreciated the most were: 1) the improvements made on the on the ponds and marshlands; 2) improved agricultural techniques; 3) maintenance of rural feeder roads; 4) compost pits.

**Graphic 44 : Activities with the strongest impact for beneficiaries**

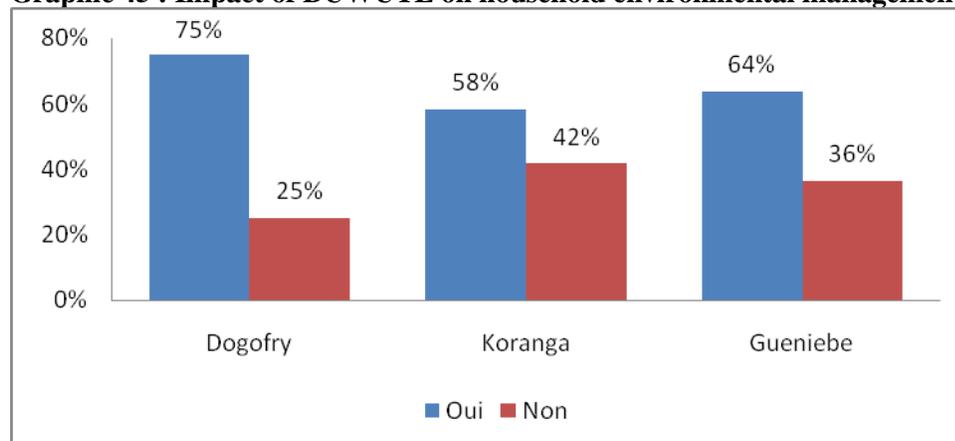


wood/charcoal  
 Compost pits  
 Vaccination enclosures  
 Digging ponds  
 Maintenance of rural feeder roads  
 Agricultural techniques  
 Storehouses  
 Post-harvest operations  
 Creation of employment

#### 4.5.16 Impact of DUWUTE on environmental management by households

The project also had an impact on household environmental management. Although the bulk of the beneficiaries interviewed thought the project improved household environment management, there were a sizable minority in each of the communes did not think there was an improvement.

**Graphic 45 : Impact of DUWUTE on household environmental management**



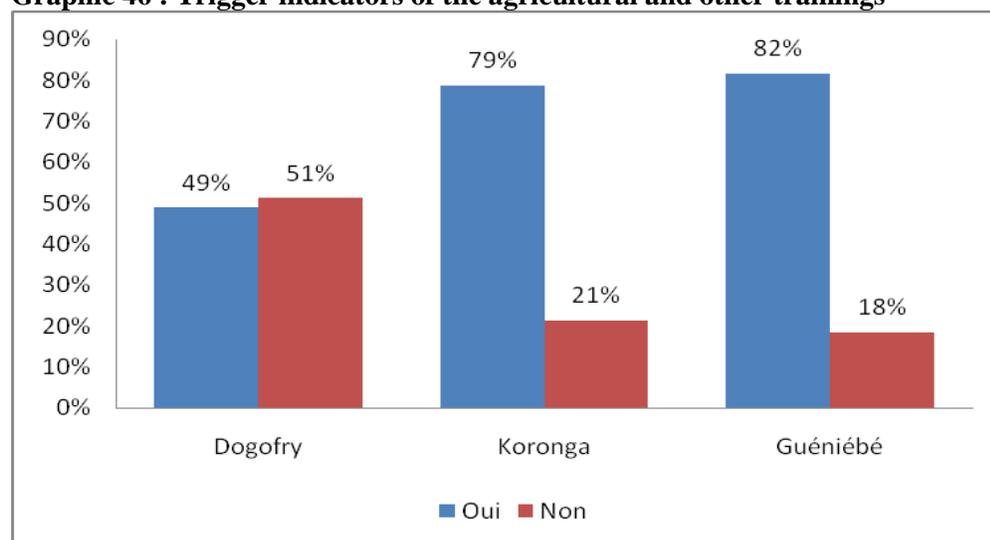
#### 4.5.17 Trigger indicators

An average, over 60% of beneficiaries thought that the *duwute* (*self-help*) process has really began for them mostly through the income generating activities that they were able to undertake

with income from CFW: raising sheep and goats, family bakery for bread and other small commercial activity.

Training trigger indicators were appreciated by 82% of beneficiaries in Guénéibé and 79%. These persons think that the training helps them to help themselves. In the commune of Dogofry, 51% of beneficiaries took the opposite view.

**Graphic 46 : Trigger indicators of the agricultural and other trainings**



### Comparison of certain indicators of the outcomes of the DUWUTE Program

Indicators	Baseline	After the DUWUTE project
<b>I. Food Security</b>		
1. Access to food	<ul style="list-style-type: none"> <li>- <b>85%</b> had difficulties accessing food during this period</li> <li>- <b>25%</b> of households questioned have been unable to cover 25%, or 3 months of food needs, after previous harvests.</li> <li>- <b>79%</b> of households were unable to cover 50% or 6 months of their food needs.</li> </ul>	<ul style="list-style-type: none"> <li>- The number of beneficiaries with access of less than one month to food fell in the 3 communes after the project;</li> <li>- The number of beneficiaries with access to between 1 and 6 months of food increased in the 3 communes. For example, the percentages increased from <b>43% to 44%</b> at Guénéibé, from <b>40% to 50%</b> at Koronga and from <b>50% to 62%</b> at Dogofry;</li> <li>- Opinions of access to food for 12 months increased from <b>2% to 6%</b> at Dogofry and from <b>3% to 7%</b> at Guénéibé.</li> </ul>
2. Level of food stocks	- Low	- Moderate
3. Price of food products on the market	- High	- High
4. Income	- Very low, if not inexistent	- Income contributed by CFW, and subsequent income-generating activities the beneficiaries undertook with their funds from CFW
<b>II. Nutrition</b>		

1. Training in techniques of nutrition	<ul style="list-style-type: none"> <li>- Limited participation in training on nutritional practices</li> <li>- Lack of understanding and mastery of nutritional techniques.</li> </ul>	<ul style="list-style-type: none"> <li>- <b>35%</b> of beneficiary households speak of improvement in their understanding of the nutritional value of foods.</li> <li>- <b>87%</b> of beneficiaries state the training on improved nutritional practices is an appropriate strategy in the framework of households' resilience in the face of food shocks.</li> <li>- <b>35%</b> indicate an improvement in mother/child health;</li> <li>- <b>26%</b> believe this training facilitated a reduction in infantile morbidity and mortality rates.</li> </ul>
<b>III. Agriculture/NRM</b>		
1. Agricultural techniques	<ul style="list-style-type: none"> <li>- Utilization of local knowledge in the techniques currently practiced by households concerning agriculture, natural resource management and livestock production.</li> </ul>	<ul style="list-style-type: none"> <li>- Agro-ecology was judged relevant</li> <li>- In the three communes, an average of <b>69%</b> of surveyed beneficiaries judged the training sessions to be relevant and improving local knowledge</li> </ul>
<b>IV. GAPRU : Early Warning and Emergency Response</b>		
1. GAPRU : instrument for data collection on food security	<ul style="list-style-type: none"> <li>- Inexistent before DUWUTE</li> </ul>	<ul style="list-style-type: none"> <li>- GAPRU: put in place and functional</li> <li>- Effective tools for information and aid to decision making</li> </ul>

## V. Lessons Learned

Overall the project was judged successful by the various stakeholders interviewed. A number of lessons learned can be drawn from the project implementation as well as this final evaluation.

### 1. Regarding communications:

- Wider diffusion of selection criteria for beneficiaries (villages and households) in a transparent manner to all stakeholders.

### 2. Regarding outcomes and effects:

#### 2.1 Improve upon the achievements and success of DUWUTE's spirit of « self-help » by:

- Building upon and adapting project infrastructure (rural feeder roads, pastoral wells, dams for water retention) to serve as a springboard for local development;

- Increasing agricultural production and productivity, environmental protection, and lower the rate of infantile mortality, the rate of malnutrition among pregnant women and children from 0 to 5 years through training sessions with target groups.

2.2 Support and reinforce sustainable and long-lasting communal development through:

- Local community organizational capacity building;
- Strengthening team spirit and social cohesion .

## VI. CONCLUSION

Implemented, in part, in response to the disastrous 2012/2013 agricultural season, the DUWUTE project was an emergency project in the face of the critical situation of a vulnerable zone.

The project objectives were:

- to increase households' access to food resources through CFW,
- to improve household practices in nutrition/food and in agriculture/NRM and
- to improve community organizational capacity

In the opinion of the targeted beneficiaries, it successful accomplished these objectives.

The beneficiary selection criteria and process was judged to be transparent by 96% of beneficiaries, though some issues were raised.

98.7% of beneficiaries consider that CFW was an appropriate strategy as part of the resilience of households faced with food shocks. Among the CFW activities and infrastructures, realization of feeder roads appears as the most pertinent. As for the training sessions, most of the beneficiaries interviewed had not benefited from them, either in agro-ecology or in nutrition. However, 84.2% feel that they are a relevant strategy regarding households' resilience in the face of food shocks.

Through CFW, the socio-economic situation of beneficiary zones has improved significantly, due to:

- construction or rehabilitation of infrastructure;
- improvement of the population's living conditions;
- diversification of sources of income;
- satisfactory supply of the markets in food stocks;
- strengthening of social cohesion and stability for households;
- reduced migration.

According to 98.7% of the beneficiaries, CFW was an effective strategy for building the households' resilience in the face of food shocks, and rural feeder road repair/establishment appeared to be the most relevant CFW undertaking. Another 84.2% of beneficiaries found the training sessions an appropriate resiliency strategy for households facing food shocks. At this stage, it is too early to state a definitive link between the training and cases of its adoption observed here and there. This prudence is necessary because the training took place at the end of the 2013 growing season.

In addition, for more than 90% of beneficiaries, management committees represented a positive approach to address such as food security, behavior change regarding nutrition and agriculture/NRM agriculture practices. As a result, over 96% of participant felt that the DUWUTE project has improved the communities' organizational capacity.

Before the project, because of the area's landlocked nature and its poverty, markets were not satisfactorily supplied according to almost 90% of the population. Internal national markets, local production and external sources, notably Mauritania, remain the principal sources of supply of food products. Prices are thought to be high in relation to the purchasing power of more than 75% of households.

These positive impacts of the DUWUTE project were reinforced by unexpected spillover effects such as:

- the rise in the water table and regeneration of vegetation, linked to rehabilitation or construction of small dams;
- facilitation of access to certain building materials (flat stones, filler stones, adobe, etc), because of deepening ponds or rehabilitation of small dams;
- motivation of neighboring non-DUWUTE villages to replicate similar CFW infrastructure work. For example, several rural feeder road were constructed by villages not targeted by the project. In this way the project served as a « field school » as was the case in the village of Korokosiè, and the hamlets of Ballé: Bouarè-Korè and Missira (Dogofry commune).

At the same time, the evaluation demonstrated some inadequacies in the project, namely:

- the duration of the project, too short to enable the beneficiaries to manage completely on their own (emergency project of 19 months);
- a communications deficiency regarding the selection criteria for villages and individual beneficiaries;
- limited involvement of other technical services in the choice of villages, as well as the selection of CFW activities and the siting of the infrastructure work;
- reduction by village leaders of participation in CFW schemes for certain beneficiaries ;
- incomplete infrastructure works;
- lack of payments for GAPRU (transport, meals), during the coordinating groups' monthly meetings.

As lessons learnt from project implementation, beneficiaries mentioned the following:



- creation of needed infrastructure (rural feeder roads, pastoral wells, dams to retain surface water) that can act as a springboard for local development;
- an appreciation of new techniques of agro-ecology, nutrition and NRM that impact the growth of agricultural production and productivity, environmental protection and reduction of migration;
- organizational capacity building in local communities increased;
- team spirit and social cohesion were strengthened.

## VII. RECOMMENDATIONS

However, to improve outcomes and increase sustainable project impacts, it would be necessary to:

- fund an extension of the project (this would involve strengthening the emergency project's achievements by setting up a longer term project);
- during CFW activities, taking into account in the costs of funding agricultural and vegetable gardening equipment (carts, plows, wheelbarrows, shovels, hoes and rakes), as well as agricultural inputs and sanitation material;
- share widely the criteria for selection of beneficiaries (villages and households) with all stakeholders, in a transparent manner ;
- solicit input from the local technical structures and specialists in the choice and development of training themes in order to take advantage of and reinforce their support for the communities ;
- extend CFW to new beneficiary villages and households;
- support the firm establishment of GAPRU groups by funding members expenses (transport and meals) to enable them to take part in the monthly coordination meetings.

## ANNEXES

**Table 1: Sampling**

COMMUNES	VILLAGES	CFW	NUTR	AGRO ECO	TOTAL	NO BENEFICIARIES	FOCUS
DOGOFRY	Balle	16	16	16	48	2	7
	Barsafe	5	3	3	11	1	4
	Bouaré Tougounè	6	6	6	18	1	4
	Dina	5	4	4	13	1	4
	Dioka	4	3	3	10	1	4
	Mounta	3	3	3	9	1	4
	Ouainka	3	3	3	9	1	4
	M'bediatt	5	5	5	15	1	4
	Sampaka	10	10	10	30	1	4
	Diguigna	7	6	6	19	1	4
	Palaly	5	5	5	15	1	4
	<b>TOTAL</b>	<b>69</b>	<b>48</b>	<b>33</b>	<b>197</b>	<b>12</b>	<b>47</b>
Koronga	Hamdallaye	3	3	3	9	2	2
	Bourass	2	3	3	8	2	2
	Moussawély	5	3	3	11	2	2
	Tirou	3	3	3	9	2	2
	Zidou-Touré	9	3	3	15	2	2
	Koronga	11	3	3	17	2	2
	<b>TOTAL</b>	<b>33</b>	<b>18</b>	<b>18</b>	<b>69</b>	<b>12</b>	<b>12</b>
GUENEIBE	Tichilatt	4	3	3	10	2	2
	Bambagoumba	6	3	3	12	2	2
	Chedem I	2	3	3	8	2	2
	Dialoubé	10	3	3	16	2	2
	Guénéibé	12	3	3	18	2	2
	Foemel	2	3	3	8	2	2
		<b>TOTAL</b>	<b>39</b>	<b>21</b>	<b>21</b>	<b>81</b>	<b>14</b>

**Table 2: Mariage status of DUWUTE beneficiaries.**

	Married		Divorced/ separated		Widower/ widow		Unmarried		Polygamous		Total in group	
	#	%	#	%	#	%	#	%	#	%	#	%
Dogofry	173	74.9%	4	1.7%	8	3.5%	7	3.0%	39	16.9%	231	100%
Koronga	52	76.5%			8	11.8%	7	10.3%	1	1.5%	68	100%
Guénéibé	38	74.5%			3	5.9%	7	13.7%	3	5.9%	51	100%
<b>Total in group</b>	<b>263</b>	<b>75.1%</b>	<b>4</b>	<b>1.1%</b>	<b>19</b>	<b>5.4%</b>	<b>21</b>	<b>6.0%</b>	<b>43</b>	<b>12.3%</b>	<b>350</b>	<b>100%</b>

**Table 3 : Sex of DUWUTE beneficiaries**

communes	Men		Women		Total in group	
	#	%	#	%	#	%
Dogofry	142	65.1%	76	34.9%	218	100%
Koronga	48	70.6%	20	29.4%	68	100%
Guénéibé	38	74.5%	13	25.5%	51	100%
<b>Total in group</b>	<b>228</b>	<b>67.7%</b>	<b>109</b>	<b>32.3%</b>	<b>337</b>	<b>100%</b>

**Table 4 : Principal Activity**

communes	Salaried		Farmer		Livestock owner		Day laborer		Petty trader		Housewife		Craftsman		Total group for	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Dogofry	4	1.8%	144	64.9%	3	1.4%	6	2.7%	15	6.8%	50	22.5%			222	100%
Koronga			51	73.9%			2	2.9%	12	17.4%	1	1.4%	3	4.3%	69	100%
Guénéibé	2	4.0%	41	82.0%			1	2.0%	1	2.0%	4	8.0%	1	2.0%	50	100%
<b>Total for group</b>	<b>6</b>	<b>1.8%</b>	<b>236</b>	<b>69.2%</b>	<b>3</b>	<b>.9%</b>	<b>9</b>	<b>2.6%</b>	<b>28</b>	<b>8.2%</b>	<b>55</b>	<b>16.1%</b>	<b>4</b>	<b>1.2%</b>	<b>341</b>	<b>100%</b>

**Table 5 : Level of Education**

communes	Not literate		Literate		Koranic		Primary		Secondary		Higher		Total in group	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Dogofry	115	54.5%	24	11.4%	31	14.7%	34	16.1%	4	1.9%	3	1.4%	211	100%
Koronga	44	64.7%	2	2.9%	20	29.4%	2	2.9%					68	100%
Guénéibé	28	56.0%	5	1.0%	6	12.0%	9	18.0%	2	4.0%			50	100%
<b>Total in group</b>	<b>187</b>	<b>56.8%</b>	<b>31</b>	<b>9.4%</b>	<b>57</b>	<b>17.3%</b>	<b>45</b>	<b>13.7%</b>	<b>6</b>	<b>1.8%</b>	<b>3</b>	<b>.9%</b>	<b>329</b>	<b>100%</b>

**Table 6 : Principal Sources of Income**

	Commerce	Salary/ pension	Cash transfer	Agricul- tural production	Sale of live- stock	Sale of wood	Petty trade	Day labor	External Assistance /aid	Hand- craft	Total for group
Dogofry	5.9%	2%	3.9%	51.2%	5.1%	3.9%	6.7%	16.1%	3.1%	2.0%	100%
Koronga	2.8%	1.8%	19.3%	31.2%	5.5%	16.5%	7.3%	11.9%		3.7%	100%
Guénéibé	11.4%	1.4%	1.4%	28.6%	4.3%	8.6%	18.6%	20%	2.9%	2.9%	100%
<b>Total</b>	<b>6%</b>	<b>1.8%</b>	<b>7.4%</b>	<b>42.5%</b>	<b>5.1%</b>	<b>7.9%</b>	<b>8.8%</b>	<b>15.7%</b>	<b>2.3%</b>	<b>2.5%</b>	<b>100%</b>

**Table 7 : Transparency in Applying Selection Criteria**

	Yes		No		Total for group	
	Number	%	Number	%	Number	%

Dogofry	181	94.3%	11	5.7%	192	100%
Koronga	58	98.3%	1	1.7%	59	100%
Guénéibé	48	100%			48	100%
<b>Total for group</b>	<b>287</b>	<b>96%</b>	<b>12</b>	<b>4%</b>	<b>299</b>	<b>100%</b>

**Table 8 : Types of CFW activities**

communes	Pastoral wells		Cereal Bank		Vaccination enclosure		Filtration dykes		Fishpond		Vegetable garden		Rehabilitation of dams	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Dogofry														
Koronga	17.8%	82.2%	15.7%	84.3%	12.8%	87.2%	6.5%	93.5%	14.2%	85.8%	15.4%	84.6%	23.1%	76.9%
Guénéibé	13.4%	86.6%	4.5%	95.5%	2.2%	97.8%		100.0%	18.7%	81.3%	1.5%	98.5%		100.0%
	<b>23.0%</b>	<b>77.0%</b>	<b>9.5%</b>	<b>90.5%</b>	<b>29.7%</b>	<b>70.3%</b>	<b>6,8%</b>	<b>93.2%</b>	<b>5.4%</b>	<b>94.6%</b>	<b>21.6%</b>	<b>78.4%</b>	<b>2.7%</b>	<b>97.3%</b>

**Continuation – types of CFW**

communes	Anti-erosion measures		Construction of dam		Maintenance of rural road	
	Yes	No	Yes	No	Yes	No
Dogofry	11.3%	88.7%	17.2%	82.8%	38,9%	61.1%
Koronga	22.4%	77.6%		100%	,7%	99.3%
Guénéibé	12.2%	87.8%	6.8%	93.2%	14,9%	85.1%

**Table 9 : Is CFW an appropriate strategy as part of households' resilience in the face of food shocks?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	198	98.5%	3	1.5%	201	100%
Koronga	64	98.5%	1	1.5%	65	100%
Guénéibé	41	100%			41	100%
<b>Total for group</b>	<b>303</b>	<b>98.7%</b>	<b>4</b>	<b>1.3%</b>	<b>307</b>	<b>100%</b>

**Table 10 : What uses have you made of your CFW?**

communes	Food	Health	Education	Clothing	Taxes	Total for group
Dogofry	50.7%	20.1%	20.1%	6.7%	2.4%	<b>100%</b>
Koronga	74.4%	8.1%		10.5%	7%	<b>100%</b>
Guénéibé	57.6%	27.3%	7.6%	7.6%		<b>100%</b>
<b>Total for group</b>	<b>55.4%</b>	<b>19%</b>	<b>15.2%</b>	<b>7.4%</b>	<b>2.9%</b>	<b>100%</b>

**Table 11: Is agriculture training an appropriate strategy?**

communes	Mastery of agricultural techniques	Increased production and productivity	Ensures food self-sufficiency	Awareness of NRM	Total for the group
Dogofry	32.9%	24%	24.7%	18.4%	<b>100%</b>
Koronga	41.7%	25%	16.7%	16.7%	<b>100%</b>
Guénéibé	25%	26.3%	25%	23.7%	<b>100%</b>

<b>Total for group</b>	<b>32%</b>	<b>24,9%</b>	<b>23.5%</b>	<b>19.7%</b>	<b>100%</b>
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**Table 12 : Has your household applied the production practices learnt during training sessions ?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	62	44.9%	76	55.1%	138	100%
Koronga	32	74.4%	11	25.6%	43	100%
Guénéibé	37	88.1%	5	11.9%	42	100%
<b>Total for group</b>	<b>131</b>	<b>58.7%</b>	<b>92</b>	<b>41.3%</b>	<b>223</b>	<b>100%</b>

**Table 13 : Is training on NRM practices an appropriate strategy as part of households' resilience in the face of food shocks?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	111	71.2%	45	28.8%	156	100%
Koronga	39	100%			39	100%
Guénéibé	39	92.9%	3	7.1%	42	100%
<b>Total for group</b>	<b>189</b>	<b>79.7%</b>	<b>48</b>	<b>20.3%</b>	<b>237</b>	<b>100%</b>

**Table 14 : Is training on improved food practices an appropriate strategy for households' resilience in the face of food shocks?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	126	86.3%	20	13.7%	146	100%
Koronga	34	87.2%	5	12.8%	39	100%
Guénéibé	36	92.3%	3	7.7%	39	100%
<b>Total for group</b>	<b>196</b>	<b>87.5%</b>	<b>28</b>	<b>12.5%</b>	<b>224</b>	<b>100%</b>

**Table 15 : What contribution does training make to improved nutritional practices?**

communes	Mastery of nutritional practices	Ensuring a balanced diet	Improved mother and child health	Reduction in rates of infantile morbidity and mortality	Total for group
Dogofry	29.3%	22.4%	33.4%	14.9%	100%
Koronga	26.9%	28.2%	30.8%	14.1%	100%
Guénéibé	26.5%	26.5%	25.8%	21.2%	100%
<b>Total for group</b>	<b>28.3%</b>	<b>24.2%</b>	<b>31.2%</b>	<b>16.3%</b>	<b>100%</b>

**Table 16 : Does your household apply the improved nutritional practices learnt during training sessions?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	82	61.2%	52	38.8%	134	100%
Koronga	27	64.3%	15	35.7%	42	100%
Guénéibé	35	87.5%	5	12.5%	40	100%

<b>Total for group</b>	<b>144</b>	<b>66.7%</b>	<b>72</b>	<b>33.3%</b>	<b>216</b>	<b>100%</b>
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**Table 17 : Is setting up Early Warning Groups (GAP or GAPRU) an appropriate strategy as part of households' resilience in the face of food shocks?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	168	97.1%	5	2.9%	173	100%
Koronga	30	76.9%	9	23.1%	39	100%
Guénéibé	50	1.0%			50	100%
<b>Total for group</b>	<b>248</b>	<b>94.7%</b>	<b>14</b>	<b>5.3%</b>	<b>262</b>	<b>100%</b>

**Table 18 : Are village level Early Warning Groups (GAPRU) integrated into the regional Early Warning System?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	116	80%	29	20%	145	100%
Koronga	26	89.7%	3	10.3%	29	100%
Guénéibé	45	95.7%	2	4.3%	47	100%
<b>Total for group</b>	<b>187</b>	<b>84.6%</b>	<b>34</b>	<b>15.4%</b>	<b>221</b>	<b>100%</b>

**Table 19 : Are Early Warning Groups (GAPRU) operational?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	147	91.3%	14	8.7%	161	100%
Koronga	31	88.6%	4	11.4%	35	100%
Guénéibé	48	96%	2	4%	50	100%
<b>Total for group</b>	<b>226</b>	<b>91.9%</b>	<b>20</b>	<b>8.1%</b>	<b>246</b>	<b>100%</b>

**Table 20 : Situation of market supplies**

communes	Satisfactory		Not very satisfactory		Unsatisfactory		Total for group	
	Number	%	Number	%	Number	%	Number	%
Dogofry	19	8.8%	150	69.8%	46	21.4%	215	100%
Koronga	16	24.2%	34	51.5%	16	24.2%	66	100%
Guénéibé	5	9.6%	34	65.4%	13	25%	52	100%
<b>Total for group</b>	<b>40</b>	<b>12%</b>	<b>218</b>	<b>65.5%</b>	<b>75</b>	<b>22.5%</b>	<b>333</b>	<b>100%</b>

**Table 21 : Source of supplies of food**

communes	Local production	Other localities	Exterior	Total for group
	%	%	%	%
Dogofry	39.1%	45.1%	15.8%	100%
Koronga	15.6%	84.4%		100%
Guénéibé	30.3%	61.8%	7.9%	100%
<b>Total for group</b>	<b>34.3%</b>	<b>53.4%</b>	<b>12.3%</b>	<b>100%</b>

**Table 22 : What was the level of food stocks?**



communes	Low		Average		Significant		Total for group	
	Number	%	Number	%	Number	%	Number	%
Dogofry	115	58.1%	82	41.4%	1	.5%	198	100%
Koronga	35	53%	28	42.4%	3	4.5%	66	100%
Guénéibé	34	69.4%	13	26.5%	2	4.1%	49	100%
<b>Total for group</b>	<b>184</b>	<b>58.8%</b>	<b>123</b>	<b>39.3%</b>	<b>6</b>	<b>1.9%</b>	<b>313</b>	<b>100%</b>

**Table 23 : What was the situation of prices of food products on the market?**

communes	High prices		Average prices		Low prices		Total for group	
	Number	%	Number	%	Number	%	Number	%
Dogofry	158	76.7%	41	19.9%	7	3.4%	206	100%
Koronga	42	63.6%	24	36.4%			66	100%
Guénéibé	42	84%	4	8%	4	8%	50	100%
<b>Total for group</b>	<b>242</b>	<b>75.2%</b>	<b>69</b>	<b>21.4%</b>	<b>11</b>	<b>3.4%</b>	<b>322</b>	<b>100%</b>

**Table 24 : Current situation of market supplies**

communes	Satisfactory		Not very satisfactory		Unsatisfactory		Total for group	
	Number	%	Number	%	Number	%	Number	%
Dogofry	56	28.4%	123	62.4%	18	9.1%	197	100%
Koronga	31	47%	35	53%			66	100%
Guénéibé	18	36%	30	60%	2	4%	50	100%
<b>Total for group</b>	<b>105</b>	<b>33.5%</b>	<b>188</b>	<b>60.1%</b>	<b>20</b>	<b>6.4%</b>	<b>313</b>	<b>100%</b>

**Table 25 : Current situation of prices of food products on the markets**

communes	High prices		Medium prices		Low prices		Total for group	
	Number	%	Number	%	Number	%	Number	%
Dogofry	160	80%	28	14%	12	6%	200	100%
Koronga	41	66.1%	19	30.6%	2	3.2%	62	100%
Guénéibé	19	41.3%	24	52.2%	3	6.5%	46	100%
<b>Total for group</b>	<b>220</b>	<b>71.4%</b>	<b>71</b>	<b>23.1%</b>	<b>17</b>	<b>5.5%</b>	<b>308</b>	<b>100%</b>

**Table 26 : Satisfaction concerning implementation of CFW**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	179	94.2%	11	5.8%	190	100%
Koronga	58	89.2%	7	10.8%	65	100%
Guénéibé	37	100%			37	100%
<b>Total for group</b>	<b>274</b>	<b>93.8%</b>	<b>18</b>	<b>6.2%</b>	<b>292</b>	<b>100%</b>

**Table 27 : Relevance and effectiveness of nutrition training**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	50	79.4%	13	20.6%	63	100%
Koronga	37	94.9%	2	5.1%	39	100%

Guénéibé	23	71.9%	9	28.1%	32	100%
<b>Total for group</b>	<b>110</b>	<b>82.1%</b>	<b>24</b>	<b>17.9%</b>	<b>134</b>	<b>100%</b>

**Table 28 : Reasons for relevance and effectiveness of nutrition training**

communes	Understanding of nutritional value of foods	Improved mother and child health	Reduction of rates of infantile morbidity and mortality	Use of bednets	Total for group
Dogofry	35.8%	32.7%	29.7%	1.8%	100%
Koronga	37.7%	41.6%	19.5%	1.3%	100%
Guénéibé	31.6%	31.6%	30.3%	6.6%	100%
<b>Total for group</b>	<b>35.2%</b>	<b>34.6%</b>	<b>27.4%</b>	<b>2.8%</b>	<b>100%</b>

**Table 29 : How did your household manage the shock linked to inadequate rainfall in the 2013 season?**

communes	Sale of means of production	Migration	Cash tranfers	Growing vegetables	Petty trade	Total for group
Dogofry	36.2%	24.3%	28.1%	11.1%	.4%	100%
Koronga	31.7%	35%	33.3%			100%
Guénéibé	31.7%	36.5%	22.2%	9.5%		100%
<b>Total for group</b>	<b>34.6%</b>	<b>28.2%</b>	<b>27.9%</b>	<b>8.9%</b>	<b>.3%</b>	<b>100%</b>

**Table 30 : What is your socio-economic situation after the DUWUTE project?**

communes	Increased income	Increase in agricultural production	Improved family nutrition	Improved health of family members	Total for group
Dogofry	36.6%	15.6%	22.2%	25.6%	100%
Koronga	37%	12%	24.1%	26.9%	100%
Guénéibé	25.5%	23.4%	24.1%	27%	100%
<b>Total for group</b>	<b>34.4%</b>	<b>16.6%</b>	<b>22.9%</b>	<b>26.1%</b>	<b>100%</b>

**Table 31 : What are your household's opinions of the DUWUTE project?**

communes	Satisfied		Dissatisfied		Total for group	
	Number	%	Number	%	Number	%
Dogofry	210	98.6%	3	1.4%	213	100%
Koronga	55	85.9%	9	14.1%	64	100%
Guénéibé	51	100%			51	100%
<b>Total for group</b>	<b>316</b>	<b>96.3%</b>	<b>12</b>	<b>3.7%</b>	<b>328</b>	<b>100%</b>

**Table 32 : Can your household support itself thanks to the training sessions received?**

communes	Yes		No		Total for group	
	Number	%	Number	%	Number	%
Dogofry	61	48.8%	64	51.2%	125	100%
Koronga	37	78.7%	10	21.3%	47	100%

Guénéiébé	31	81.6%	7	18.4%	38	<b>100%</b>
Total for group	129	61.4%	81	38.6%	210	<b>100%</b>

**Table 33 : Reasons why CFW is effective**

communes	If Yes, why is CFW an appropriate strategy for resilience			If No, why is CFW not an appropriate strategy for resilience
	Food Self-sufficient	Increase household income	Reduce overall poverty	
Dogofry		66.7%	33.3%	
Koronga	54.5%	36.4%	9.1%	
Gueniébé	76.9%	23.1%		

**Table 34 : Are Early Warning Groups (GAPRU) an appropriate strategy as part of households' resilience in the face of food shocks?**

communes	Yes	No	Total for group
Dogofry	100%		<b>100%</b>
Koronga	75%	25%	<b>100%</b>
Gueniébé	81.8%	18.2%	<b>100%</b>
<b>Total for group</b>	<b>85.7%</b>	<b>14.3%</b>	<b>100%</b>

**Table 35 : In what way are Early Warning Groups (GAP or GAPRU) an appropriate strategy as part of households' resilience in the face of food shocks?**

communes	Timely diffusion of information	Identification of zones at risk of food shortage	Estimating measures to be taken	Management of food stocks	Total for group
Dogofry	30.6%	25%	22.2%	22.2%	<b>100%</b>
Koronga	42.9%	14.3%	21.4%	21.4%	<b>100%</b>
Gueniébé	35.7%	17.9%	17.9%	28.6%	<b>100%</b>
<b>Total for group</b>	<b>34.6%</b>	<b>20.5%</b>	<b>20.5%</b>	<b>24.4%</b>	<b>100%</b>

**Table 36 : What is the situation of supplies in the markets?**

communes	Satisfactory		Not very satisfactory		Unsatisfactory		Total for group	
	Number	%	Number	%	Number	%	Number	%
Dogofry	4	30.8%	2	15.4%	7	53.8%	13	<b>100%</b>
Koronga	2	16.7%	9	75%	1	8.3%	12	<b>100%</b>
Gueniébé			7	70%	3	30%	10	<b>100%</b>
<b>Total for group</b>	<b>6</b>	<b>17.1%</b>	<b>18</b>	<b>51.4%</b>	<b>11</b>	<b>31.4%</b>	<b>35</b>	<b>100%</b>

**Table 37 : What were your sources of supply of food products?**

communes	Local production	Other localities	Exterior	Total
Dogofry	33.3%	55.6%	11.1%	<b>100%</b>
Koronga	30.8%	69.2%		<b>100%</b>
Gueniébé	27.3%	63.6%	9.1%	<b>100%</b>
<b>Total</b>	<b>31%</b>	<b>61.9%</b>	<b>7.1%</b>	<b>100%</b>

**Table 38 : What was the level of food stocks?**

communes	Low		Average		Significant		Total	
	Number	%	Number	%	Number	%	Number	%
Dogofry	6	50 %	4	33.3%	2	16.7%	12	100%
Koronga	6	50%	5	41.7%	1	8.3%	12	100%
Gueniébé	1	9.1%	10	90.9%			11	100%
<b>Total</b>	<b>13</b>	<b>37.1%</b>	<b>19</b>	<b>54.3%</b>	<b>3</b>	<b>8.6%</b>	<b>35</b>	<b>100%</b>

**Table 39 : Anticipated outcomes and effects of the DUWUTE project**

communes	Yes		No		Total	
	Number	%	Number	%	Number	%
Dogofry	11	91.7%	1	8.3%	12	100%
Koronga	11	91.7%	1	8.3%	12	100%
Gueniébé	11	100%			11	100%
<b>Total</b>	<b>33</b>	<b>94.3%</b>	<b>2</b>	<b>5.7%</b>	<b>35</b>	<b>100%</b>

**Table 40 : Outcomes and effects of the DUWUTE project**

communes	Availability of drinking water	Fish-pond	Care and support of certain households	Behavior change	Maintenance of rural roads	Supply of vegetable produce	Poverty reduction	Food aid	Total
Dogofry	20%	6.7%	20%	13.3%	6.7%	6.7%	26.7%		100%
Koronga	23.1%		23.1%	15.4%	15.4%		15.4%	7.7%	100%
Gueniébé	9.1%	18.2%	9.1%	18.2%		36.4%	9.1%		100%
<b>Total</b>	<b>17.9%</b>	<b>7.7%</b>	<b>17.9%</b>	<b>15.4%</b>	<b>7.7%</b>	<b>12.8%</b>	<b>17.9%</b>	<b>2.6%</b>	<b>100%</b>

**Table 41 : Positive effects of the Program**

communes	Forest management	Maintenance of vegetable gardens	Food self-sufficiency	Deepening ponds	Filtration dykes	Pastoral wells	Construction of dams	Fish-ponds	Total
Dogofry	16.7%	25%	16.7%	8.3%	8.3%	8.3%	8.3%	8.3%	100%
Koronga	57.1%	28.6%	14.3%						100%
Gueniébé	42.9%	50%	7.1%						100%
<b>Total</b>	<b>36.4%</b>	<b>36.4%</b>	<b>12.1%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>100%</b>

**Table 42 : Measures taken for sustainable management of CFW infrastructure**

communes	Maintenance	Contribution by all vegetable garden users	Surveillance committee	Total for group
Dogofry	40%		60%	100%
Koronga	66.7%		16.7%	100%
Gueniébé	60%		40%	100%
<b>Total for group</b>	<b>53.8%</b>		<b>19.2%</b>	<b>100%</b>

**Table 43 : Activities implemented having a positive impact on the target population's resilience**

communes	Sale of wood/char-coal	Compost pits	Vaccination enclosures	Deepening ponds	Maintaining rural roads	Agricultural techniques	Store-house	Post-harvest Operation	Job creation	Total
Dogofry	8.3%	8.3%	16.7%	8.3%	25%	8.3%	8.3%	8.3%	8.3%	100%
Koronga	22.2%			44.4%	33.3%					100%
Gueniébé	20%	30%	10%			40%				
<b>Total</b>	<b>16.1%</b>	<b>12.9%</b>	<b>9.7%</b>	<b>16.1%</b>	<b>19.4%</b>	<b>16.1%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>100%</b>

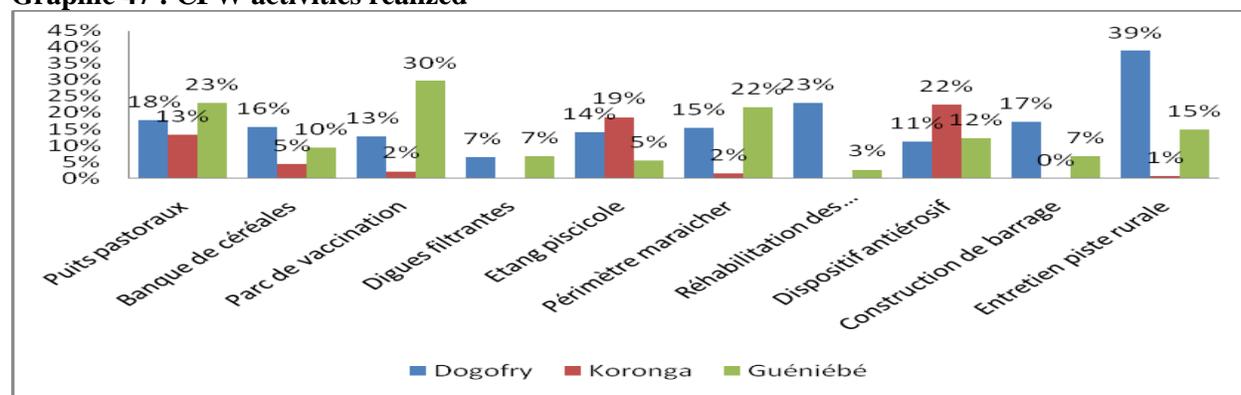
**Table 44 : Households' management of the shock linked to inadequate rainfall for the 2013 season**

communes	Sale of means of production	Migration	Cash transfers	Day labor	Total
Dogofry	50%	41.7%		8.3%	100%
Koronga	16.7%	58.3%	25%		100%
Gueniébé	54.5%	27.3%	9.1%	9.1%	100%
<b>Total</b>	<b>40%</b>	<b>42.9%</b>	<b>11.4%</b>	<b>5.7%</b>	<b>100%</b>

**Table 45 : Impact of the DUWUTE Program on environmental management**

communes	Yes		No		Total	
	Number	%	Number	%	Number	%
Dogofry	9	75%	3	25%	12	100%
Koronga	7	58.3%	5	41.7%	12	100%
Gueniébé	7	63.6%	4	36.4%	11	100%
<b>Total</b>	<b>23</b>	<b>65.7%</b>	<b>12</b>	<b>34.3%</b>	<b>35</b>	<b>100%</b>

**Graphic 47 : CFW activities realized**

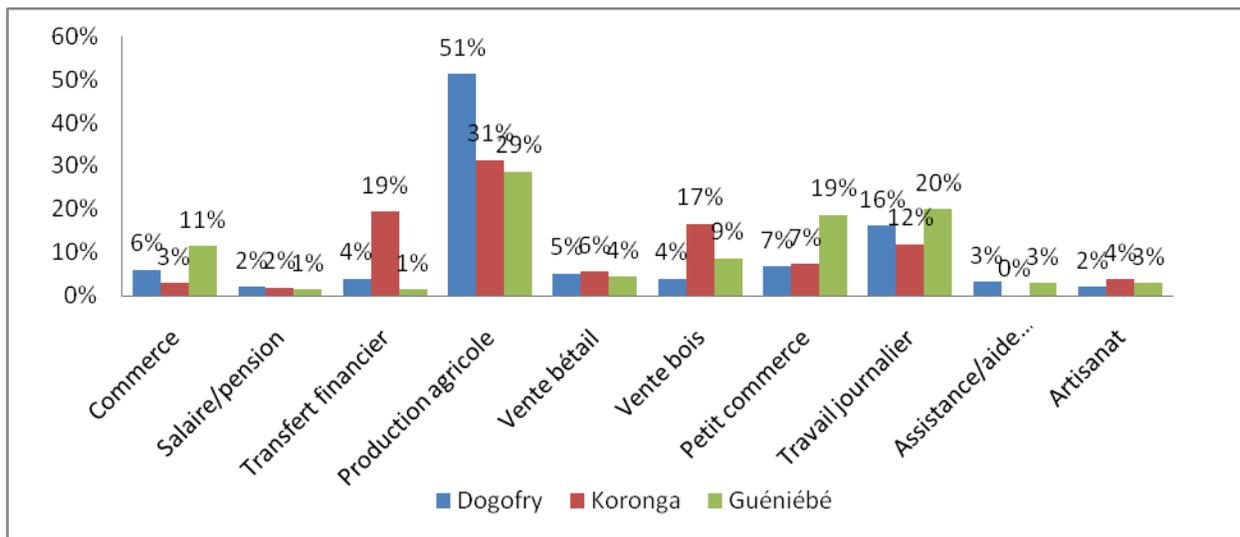


Pastoral wells  
 Cereal bank  
 Vaccination enclosure  
 Filtration dykes  
 Fishpond  
 Vegetable garden  
 Rehabilitated of  
 Anti-erosion measures  
 Dam construction  
 Feeder road maintenance

**Graphic 48 : Sources of households' income**



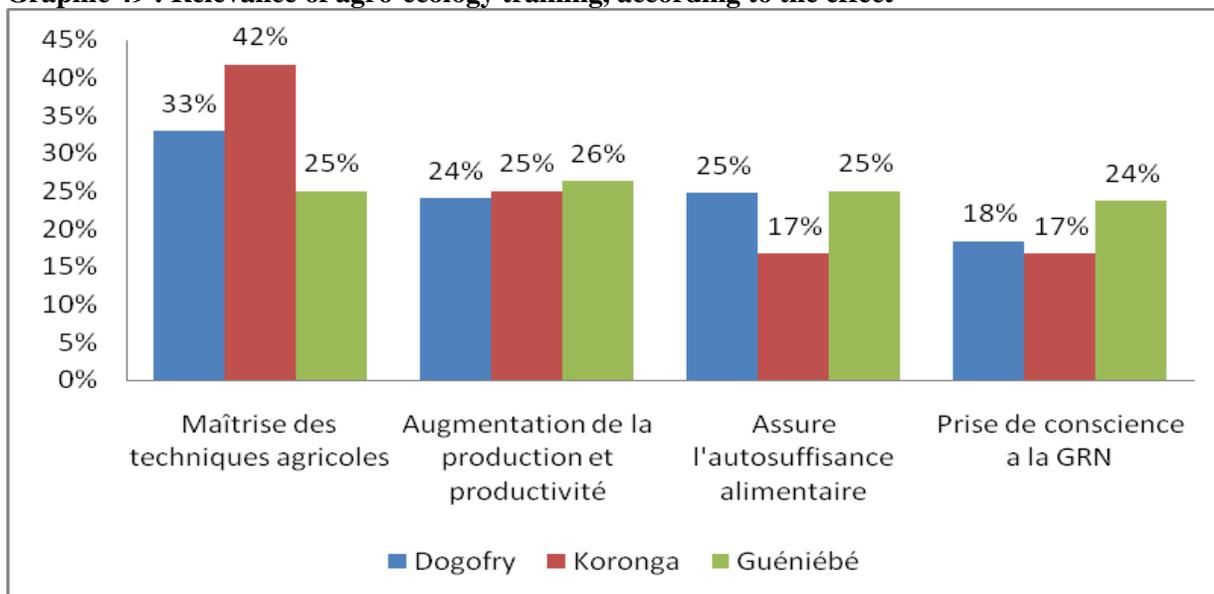
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 Compte Bancaire : 000289002001 Banque Malienne de Solidarité (BMS-SA)- Bamako.



**(sources of income)**

- Trade
- Salary/Pension
- Cash transfer
- Agricultural production
- Sale of livestock
- Sale of wood
- Petty trading
- Day labor
- Assistance/aid
- Handcraft

**Graphic 49 : Relevance of agro-ecology training, according to the effect**



Mastery of agricultural techniques

Increase in production and productivity

Ensuring food self-sufficiency

Awareness of NRM



**Graphic 50 : Relevance of nutrition training**

