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**FINAL Report of Waati Yelema Labenw Final Evaluation**

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***FINAL EVALUATION***  
***WAATI YELEMA LABENW PROJECT***  
***FINAL REPORT***

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## Sigles & Abbreviations

Abbreviations	Labels
3 AS	Adaptation, Absorption et Anticipation
AMASSA Afrique Verte	Association Malienne pour la Sécurité et la Souveraineté Alimentaire
CCACC	Communal Committee for Adaptation to Climate Change
CCAFS	Climate Change and Food Security
CCAM	Climate Change Adaptation Management
CSA	Climate Smart Agriculture
CVACC	Village Committee for Adaptation to Climate Change
DGCT	Directorate General of Territorial Communities
FE	Final Evaluation
ICMO	Intervention-Context-Mechanism-Outcome
ICRISAT	International Crops Research Institute for the Semiarid Tropics
IER	Institute of Rural Economy
IGA	Income Generating Activity
KM	Knowledge Manager
PDSEC	Economic and Cultural Social Development Plan
SMS	Short Message Service
ToR	Terms of reference
WYL	Waati Yelema Labenw

## Acknowledgments

We thank all those who have spared no effort in designing and conducting this final evaluation of the WYL project, built around community initiatives aimed at strengthening the resilience of communities to the adverse effects of climate change.

This work was made possible thanks to the support of various stakeholders (institutions, communities, local authorities) who welcomed us and devote their time to share their experiences in the implementation of the WYL project.

Our recognition and gratitude to the management team of the WYL project and its institutional implementing partners (AMASSA AFRIQUE VERTE and ICRISAT / CCAFS), who spared neither their time nor their effort for the success of this mission devaluation.

We also thank the field data collectors (investigators, supervisors, IT data manager) and other support staff who worked in often difficult conditions (ambient insecurity, heat wave, etc.).

## 1. Description of Waati Yelema Labenw project

The Waati Yelema Labenw project (WYL) is financed by UKaid under the BRACED-X program. It is inspired by the rich experiences and satisfactory results of RIC4REC to reinforce the achievements of this one through: The training, the supervision and the support to the communal and community leaders to facilitate the analysis, the planning and the actions of adaptation and resilience to climate change within their communes and communities.

It institutionalizes the management of climate change adaptation actions by the community. Local elected officials acquire capacities to facilitate the analysis, planning and implementation of climate change adaptation actions.

Municipalities approve Community priority actions for funding through a project micro-grant mechanism. In the designated communes, WYL's activities will be integrated into the BRACED decentralized climate finance project.

The experience of communes through RIC4REC and WYL is shared with regional and national policy and programmatic decision-makers through study tours, documentation and sharing of best practices and lessons learned.

## 2. Objectives of the project

The Waati Yelema Labenw (WYL) project aims to improve the resilience of poor people in Mali to climate-related shocks and constraints and aims to reach 26,000 beneficiaries including 4,000 women through the creation of 100 companies and savings groups sustainable, climate-friendly and market-oriented. It will improve incomes, increase savings and access to finance, while increasing the capacity for anticipation, adaptation and absorption (3As).

## 3. Project Strategies

Project activities are focused on three (3) strategies:

### ❖ **Making CCAM a priority with strong community basis for implementation**

Facilitation in the 10 targeted communes of the Climate Change Adaptation Management (CCAM) process with a focus on broad impact actions and the financing of resilience action plans.

### ❖ **Empower communities to use climate information to make management decisions about their livelihoods that reduce risk**

Promote the adoption of agricultural practices and livestock adapted to the climate and environmentally friendly while promoting access to targeted climate information.

### ❖ **Increase resources and access to resources through creation of market-oriented group membership micro enterprises owned by vulnerable persons**

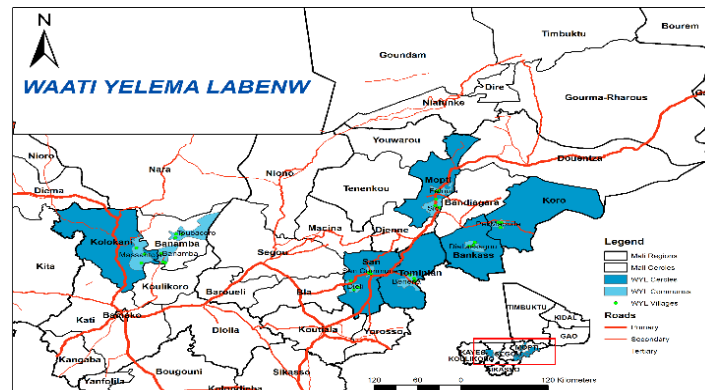
- Creation of 10 market-oriented vegetable companies.
- Creation / reinforcement of 30 farmer grain marketing groups of 50 members each.

- Creation / reinforcement of 30 small ruminant breeding and marketing groups (mostly women)
- Establishment or strengthening of 30 savings and credit groups around established microenterprise activities and establishing links with formal microfinance institutions

#### 4. Project intervention area

The project is implemented in ten (10) Communes and thirty (30) villages in the regions of Mopti, Segou and Koulikoro.

Map 1: Project WYL intervention area



#### 5. Implementing partners of the project

The project is implemented in Mali by Blumont International in partnership with AMASSA AFRIQUE VERTE and ICRISAT / CCAFS. The implementation of the project is also done in partnership with the target municipalities and the Directorate General of Territorial Communities (DGCT).



## 6. The theory of change

The project "Waati Yelema Labenw is funded by the Department for International Development - (DFID): it aims to improve the resilience of poor people in Mali to climate-related shocks and constraints and reach 26,000 beneficiaries, including 4,000 women, through the subsidization of resilience activities and the creation of 100 sustainable, climate-friendly and market-oriented cereal marketing, small ruminant, market gardening and savings-loan businesses.

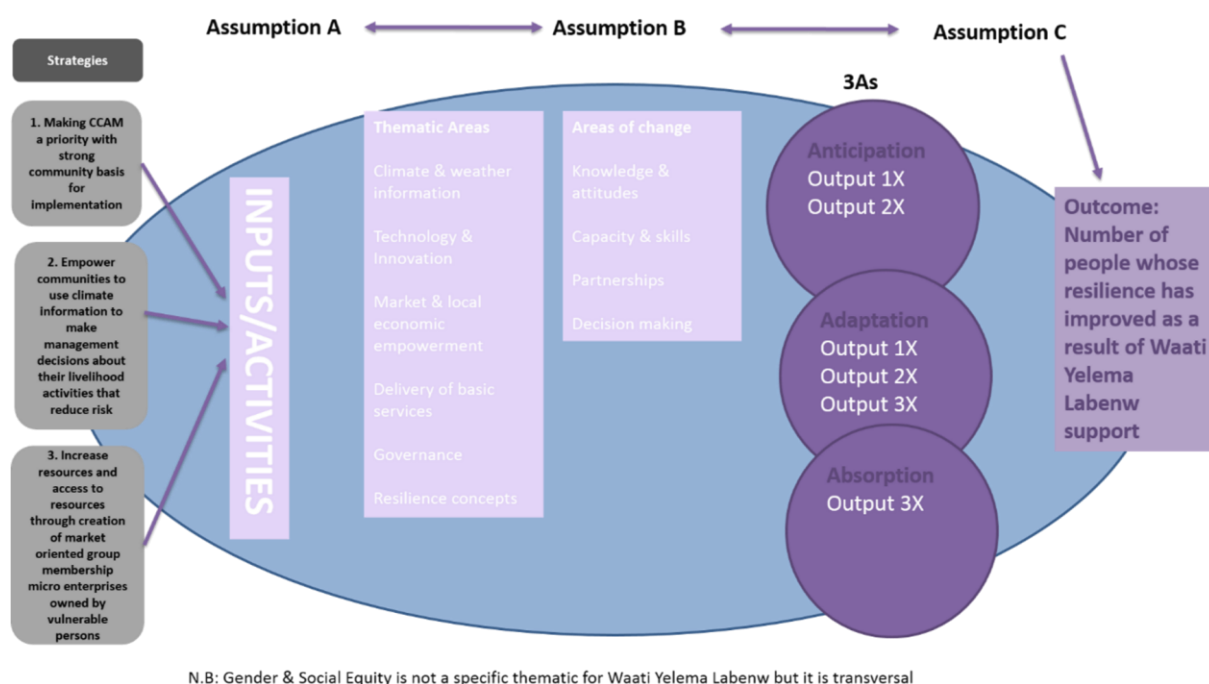


Figure 1: Theory of change WYL

The original hypothesis of Waati Yeleman Labenw's theory of change (WYL) is stated as follows:

*If communities and governments (local and national) are trained and given support to overcome identified constraints to operationalizing adaptive, absorptive and anticipatory capacities of men and women in the areas of social cohesion, climate-adapted livelihoods, Natural Resource Management (NRM), and governance, then they will minimize their vulnerabilities to climatic shocks and stresses, specifically rainfall variability that causes drought and floods, and be able to increase their resilience and their well-being.*

The different information collected from the communities, local authorities and other project implementing partners has edified us in relation to the main hypothesis formulated for the WYL project. The range of activities that the project carried out in a short time, allowed to have the expected results and those unexpected. Unlike other BRACED projects that have continued to operate in the same areas as in the previous phase, WYL has been involved in new villages in 10 RIC4REC implementation communes. The new approach adopted by the project, namely a better involvement of grassroots communities and the involvement of local authorities as an integral part, emerged as the reason for a better ownership of the project activities by the different stakeholders. This new approach stems from the lessons learned from the mid-term and final evaluations of RIC4REC. The different aspects of training (around the themes of climate change, CSA, simplified management of micro enterprises, market gardening techniques, development of business plans,

fattening techniques, storage of cereals etc.), granting of grant funds, exchange visits, climate information, constituted the change towards the resilience of the most vulnerable communities by improving their field of competence (knowledge and attitude, capacity and skills, partnership and their decision-making process) while improving their capacity for Adaptation, Absorption and Anticipation (3As). So this hypothesis is confirmed to lead to the changes that the project had planned.

## 7. Description of the basic assumptions

The final evaluation of the WYL project focused on testing the various hypotheses related to the implementation of the three strategies 01, 02 and 03 to confirm or reformulate the different hypotheses, namely:

### *Strategy 1: Making CCAM a priority with strong community basis for implementation*

#### **Assumptions**

- Local groups possess the minimum skills to carry out the CCAM process,
- Vulnerable groups are receptive to the support mechanisms put in place by the Waati Yelega Labenw project,
- Government employees (national and local) are willing to participate in project capacity building and knowledge exchange activities.
- Communities are receptive to CCAM mechanisms,
- Community leaders have adequate capacity for analysis, planning and climate change adaptation strategies (CCA)

Strategic interventions have enabled people in the community to analyze their environment through participatory diagnoses and to plan activities that fall within their management capacities and to create self-resilience in the face of shocks and stress related to climate change. The practical knowledge acquired by communities about their own vulnerabilities and the opportunities for adaptation to climate change have created a framework of collective actions supported by the technical and financial partners of their communes to strengthen resilience.

State technical service agents have been trained in climate change analysis to increase awareness and provide better support to communities even after the project has started. For the treatment and vaccination of animals, the veterinary technical service accompanied the project by a blow insured by the project. In terms of sustainability, linking the agents of the technical services of the State and the communities has allowed more to create a synergy between them. They now know how to be in touch with them through their CVACC.

### *Strategy 2: Empower communities to use climate information to make management decisions about their livelihoods that reduce risk*

#### **Assumptions**

- Meteorological institutions provide communities with adequate data on climate projections,
- Group members have correctly used climate information and implemented resilience grants,
- Group members apply CSA techniques adapted to climate change,

- Beneficiaries use climate information (weather forecasts or advisory services) to make livelihood decisions.

Selected groups have been trained in the use of innovative meteorological and agronomic information media using mobile phone technologies (Sandji / Senekela) in collaboration with private sector partners (Orange Mali). This information has strengthened their ability to make good and useful decisions in time to ensure the stability of agricultural production and food security in the face of climate shocks due to variable rainfall. But the limit with Sandji is that the intervention zone must be covered by the Orange Mali network and that the user of the service knows how to read at least in the opposite case he is obliged to resort to a third person. Other ways to access climate information exist as information provided by Mali weather through radio stations. But the limit with Mali Météo what information is given at the regional and communal level but not precisely at the village level. He continues to work to find alternatives to further improve the system. Mali Météo being a national structure, it is more sustainable.

Groups were trained on environmentally friendly CSA techniques that mitigate climate change shocks and are highly relevant to the context of project areas.

These different activities made it possible to achieve the expected results in relation to the assumptions made. The assumptions of this strategy are plausible.

***Strategy 3: Increase resources and access to resources through creation of market-oriented group membership micro enterprises owned by vulnerable persons***

**Assumptions**

- If the administrative / customary authorities agree to allocate enough land for market gardening activities,
- If there is an enabling environment for the creation and viability of village enterprises
- groups of companies better oriented towards the market,
- Savings groups better organized and functional.
- Good collaboration between microfinance institutions and communities,
- Microenterprises are established and functional (market gardening, savings groups, cereal banks, small ruminant farming).

Community group members received training in small business management, financial management, marketing and technical topics related to post-harvest grain management, small-scale irrigation for vegetable crops and livestock. Group members managed business and made decisions to conserve natural resources while improving productivity and income generation, including private sector partners, women and youth. Microenterprises are established and functional.

But the assumption of good collaboration with microfinance institutions has not been successful because the information collected reveals that communities do not trust microfinance institutions given the history. For some of these institutions (eg Jigiya Soba and Kondo Jigima in Banamba Circle) have gone bankrupt in the past and / or credit conditions are not within the reach of communities. So, they prefer to set up credit savings groups (tontines) in their communities, which they trust and through which, they easily grant credits between them.

The final evaluation (FE) followed the guidelines and evaluation notes 07 for each set of project intervention results, as defined in WYL Strategies 01, 02 and 03. Specific sub-questions of the project have been developed in the WYL evaluation matrix.

For this evaluation, we used a realistic approach. The realistic approach allowed us to explore multiple interpretations of the term resilience. Move away from rhetoric and ask fundamental but important questions that have allowed us to better understand what resilience is in different contexts and how resilience is built. Moving from rhetoric to reality means that the final evaluation of the WYL project can not measure "impact" or "resilience" as defined in the project documentation or in the reference given the duration of the project. Our growing understanding of what matters to build resilience means that some important elements have guided us to better chart the path to change to achieve the desired impact. So, we have been flexible and iterative in our approach.

## 8. Evaluation and data collection Methodology

### 8.1 Methodological approach

The methodological approach for this Final Evaluation (FE) was designed in accordance with Monitoring and Evaluation Guidance Note 07 of Knowledge Management (KM) for each WYL project intervention result set designated for through its strategies 01, 02 and 03. Specific project sub-questions have been developed in the **WYL evaluation matrix**.

**The documentary review:** The project's core reports, the monthly reports of activities and mid-term and final evaluations produced by Blumont (RIC4REC) were consulted. This allowed to have an overview of the activities carried out by the actors in charge of the implementation (Blumont, AMASSA Afrique Verte, ICRISAT and the General Directorate of the Territorial Collectivities).

**The collection phase:** The data collection was participatory in that it involved the different stakeholders of the project:

- At national level by the DGCT;
- At the municipal (common) level represented by the CCACCs;
- At the village level by the CVACC;
- At the community level by the different groups of beneficiaries;
- Implementing actors (WYL, AMASSA Afrique Verte and ICRISAT).

**The pragmatic method:** To provide answers to the questions asked in the specifications, the evaluation team collected qualitative and documentary data, which made it possible to analyze the results obtained, the difficulties of implementation, the relevance, the effectiveness, and the sustainability of actions.

**The realistic evaluation method and data collection:** The Final Evaluation (FE) was designed in accordance with Monitoring and Evaluation Guidance Note 07 of Knowledge Management (KM) for each WYL project intervention result set designated for through its strategies 01, 02 and 03. Specific project sub-questions have been developed in the WYL evaluation matrix.

For this evaluation, we also used a realistic approach that explored multiple interpretations of the term resilience. In a realistic evaluation context, we examine the most important influence on the success of an intervention in activating a change process (often called a "mechanism") that will lead to a result.

Qualitative data collection using a questionnaire template was conducted during the various focus group interviews. The evaluation collected quantitative data on the two (2) important measures of the project (one impact indicator and three resilience outcome indicators). Below are the indicators concerned:

- % of beneficiaries whose resilience has improved with the support of WYL's;
- % of beneficiaries surveyed who claim to have used climate information (weather forecasts or advisory services) to make livelihood decisions with project support;
- % of surveyed beneficiaries who claim to have applied climate smart practices with project assistance;
- % of beneficiaries surveyed who report having increased income from activities supported by the project

### 8.2 Sampling

The WYL project has implemented several activities in the regions of Koulikoro, Segou and Mopti. Some beneficiaries were supported by the project for one activity and other beneficiaries received support in several activities. Apart from the training provided by the project, some CVACC members received no further support from the project. As the information collected is strongly linked to the activities implemented, the beneficiaries were grouped into **five (05) homogeneous groups called strata** according to the number of activities benefited. Sampling is done in such a way that each region has a representative sample.

With a margin of error of  $\pm 5\%$  and a 95% confidence level for a population of 5191, we have a sample of 319 beneficiaries to investigate in Koulikoro, 337 in Mopti and 316 beneficiaries in Segou; which gives us a total of 972 people to investigate.

The distribution of beneficiaries to be surveyed was proportional to the size of the strata at the level of each region. Given the deteriorating security situation in the Mopti region, the number of people surveyed was revised downwards, which led to a total of **694 beneficiaries interviewed instead of 972**. The decrease is only recorded in level of the Mopti region where representativeness was low.

### **8.3 Focus Group**

In addition to this quantitative survey of a sample of direct beneficiaries of the project, focus groups were organized with beneficiaries and non-beneficiaries. Interviews were held with key informants, village chiefs, elected municipal officials and stakeholders in the implementation of the project.

A guide for interviews with focus groups was developed. Focus groups, which included an average of between 08 and 12 people (at least 30% women) with group interviews were conducted in each of the 08 towns with:

- The members of the intervention groups (CVACC, market gardening, cereal banks, fattening, small ruminants breeding and credit savings),
- Key informants: village chiefs, community leaders, elected officials
- Project staff: Blumont, AMASSA, ICRISAT, DGCT.

### **8.4 Training of the investigators**

For data collection in the field, the Consultant mobilized a team of 12 investigators, 01 computer programmer for the configuration of the tablets and 03 supervisors. This team received theoretical training on the administration techniques of the individual questionnaire and the guide for the focus groups.

#### **8.4.1 Pre- test**

To complete this theoretical training, a pre-test was organized in the village of Tomba (as Banamba Koulikoro region) to allow the team to become familiar with the reality in the villages, on the other hand, to validate the tools or make any modifications. The pre-test validated the functionality of the data collection platform.

### **8.5 Input application and implementation on tablets**

As part of this evaluation, one (1) individual questionnaire was developed and submitted.

A capture application was designed using Kobotoolbox, which serves as a platform for data collection. An account was created on Kobotoolbox on which the individual questionnaire was developed and parameterized, after the development and the setting of the form, it was its deployment for the collection and the data entry. All IT control and validation procedures were done with limited access rights to data entry. Then this created platform served as the data base with which the form was shared. It is this account created on kobotoolbox that is shared with field agents for collecting and entering data and information for submission to the platform. This is done to secure the data by not allowing their modification without the assistance of the administrator of the main account that is not shared.

Beforehand, on each tablet the application kobocollect (which allows to collect) has been downloaded and installed. Then, using kobocollect the form is downloaded to the tablets.

In addition, simulation work and tests made it possible to better identify the imperfections of this form and the possible difficulties that the agents might encounter in the field during the data collection. The setting is done so that the form is automatically sent to the server (Platform) as soon as an internet connection is available. Finally, a new version of the form was downloaded to the tablets, incorporating some minor corrections to the questionnaire for improvement. It is with this last version that the actual collection of data has been made.

Finally, the completion of a form lasted about 30 to 45 minutes per investigator and the availability of beneficiaries to investigate.

## ***8.6 Tabulation and data processing***

The data processing already starts in the field with the synthesis of the results of the recordings obtained through the focus groups. These results served to explain and supplement the information derived from the quantitative data. This information has been disaggregated by sex, region, making comparisons between the different localities and the activities carried out to know the activities that have a great contribution in the short term.

After submitting all the data to the platform by the investigators, it was the export of the spreadsheet to Excel for cleaning and data processing.

For data processing and synthesis, the Excel PivotTable was used to calculate the four (4) main indicators, which allowed us to see the reasons and trends of these indicators.

## 9. Evaluation Team

### 9.1 Composition of the team

- i) Mr Oumar Mallé, Agricultural Economics, Expert in Project Monitoring and Evaluation (CARI)
- ii) Mr Souaibou D Diallo, computer engineer, head of mission (Sabine Sarl)
- iii) Mr Sidy Boly, Economist Statistician Engineer (specialty labor economics)
- iv) Mr Mamadou BALLO, Holder of a Master of Research in Agricultural Extension and Development (University of Ibadan, Nigeria)
- v) Mr Ibrahim Dicko, computer scientist, Data Manager

Conducted this evaluation mission with the assistance of experienced investigators (estimated at about ten).

### 9.2 Duties and Roles of Evaluation Team Members

The following table gives the composition of the Team and the responsibilities / tasks of each of its members.

Family name, first names	Profil / Position	Responsibilities/Tasks
Mr Souaibou Diallo	Sabine SARL Promoter	<ul style="list-style-type: none"> <li>• Participate in the drafting of the inception report</li> <li>• Administrative management of the contract</li> <li>• Reporting</li> <li>• Quality assurance</li> </ul>
Mr Oumar Mallé	Monitoring Evaluation Expert	<ul style="list-style-type: none"> <li>• Methodological Conduct of the Study</li> <li>• Development of tools and guides</li> <li>• Coordination of the field collection mission</li> <li>• Reporting</li> </ul>
Mr Sidy Boly Mr Mamadou Ballo	Statistician Expert Agricultural Extension and Development Specialist	<ul style="list-style-type: none"> <li>• Translation of deliverables into English</li> <li>• Training of supervisors and investigators in collection tools</li> <li>• Reporting and English translations</li> </ul>
Mr Ibrahim DICKO	Computer scientist, Data Manager	<ul style="list-style-type: none"> <li>• Programming of collection tools on tablets using Kobotoolbox</li> <li>• Data processing</li> </ul>
Equipe d'enquêteurs et de superviseurs	A dozen including 2 supervisors and 11 investigators	<ul style="list-style-type: none"> <li>• Collect data in the field</li> <li>• Ensure data entry / control</li> </ul>



## 10. Process of data collection

The collection of information was carried out for 10 days among beneficiaries and project implementers by a team of investigators and supervisors deployed simultaneously in the regions of Koulikoro, Ségou and Mopti. The consultants themselves conducted the interviews in Bamako with stakeholders involved in the implementation of the WYL project.

Table 1: Distribution of beneficiaries surveyed by region

Circle/Commune/Village	KOULIKORO	MOPTI	SEGOU	Total
<b>BANAMBA</b>	<b>210</b>			<b>210</b>
<b>BANAMBA</b>	<b>107</b>			<b>107</b>
BOUGOUNINA	29			29
GANA	43			43
TOMBA	35			35
<b>TOUBACORO</b>	<b>103</b>			<b>103</b>
BOUALA	46			46
M'PEBOUGOU	30			30
NIARE	27			27
<b>KOLOKANI</b>	<b>111</b>			<b>111</b>
<b>MASSANTOLA</b>	<b>111</b>			<b>111</b>
DOSSOROLA	33			33
MANTA	47			47
MPESSERIBOUGOU	31			31
<b>MOPTI</b>		<b>60</b>		<b>60</b>
<b>FATOMA</b>		<b>17</b>		<b>17</b>
DESSERE		5		5
KORIYAWEL		10		10
SANGOUBAKA DJENERI		2		2
<b>SIO</b>		<b>43</b>		<b>43</b>
KARAMANI		16		16
PERIMPE		16		16
YOURE		11		11
<b>SAN</b>			<b>207</b>	<b>207</b>
<b>DIELI</b>			<b>108</b>	<b>108</b>
BOUNOUMBA MARKASSO			37	37
N'GONISSO BAMBARA			36	36
SOUMBALA			35	35
<b>SAN COMMUNE</b>			<b>99</b>	<b>99</b>
PARADIARA			37	37
PARANA BOBO			27	27
TEREKOUGO			35	35
<b>TOMINIAN</b>			<b>106</b>	<b>106</b>
<b>BENENA</b>			<b>106</b>	<b>106</b>
DIARAKUY			36	36
KANKOROKUY			31	31
SOCIALO			39	39
<b>Total</b>	<b>321</b>	<b>60</b>	<b>313</b>	<b>694</b>

*Source: Final evaluation of the WYL project, April 2019*

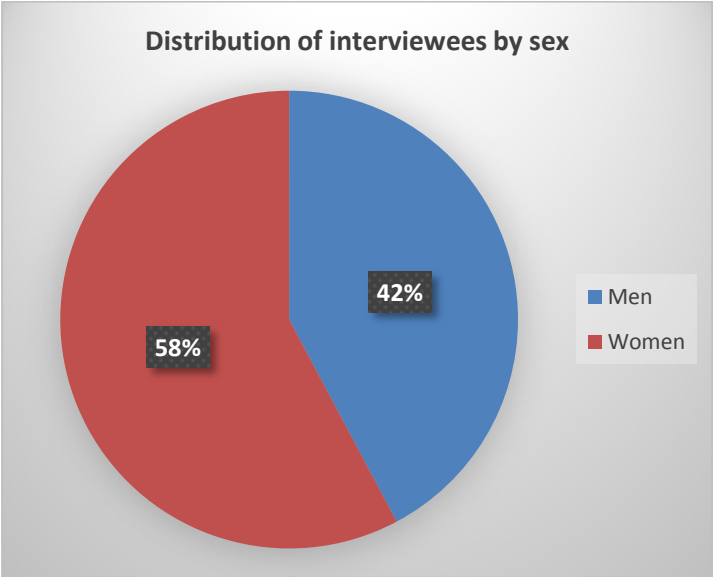
Thus, the communities of 24 villages in 08 communes in 05 circles in the regions of Koulikoro, Segou and Mopti were surveyed in the field (ie 694 beneficiaries for the individual questionnaires). Added to this are the information provided by the members of the focus groups, the members of the CVACC committee, the management committees of the cereal banks, the savings and credit groups, small ruminant breeding, fattening, gardening, a few key informants in each village and representatives of stakeholders in the implementation of the project WYL.

**11. Main results of the evaluation study**

The individual questionnaire was administered at the level of the various beneficiaries of WYL project activities. The sample that was planned for the evaluation of a total of 972 people was revised downwards given the security aspects in the areas of Mopti and Koulikoro. Finally, only 694 people were willing to complete the questionnaires. So, the relative information collected will be reported in relation to the 694 individuals.

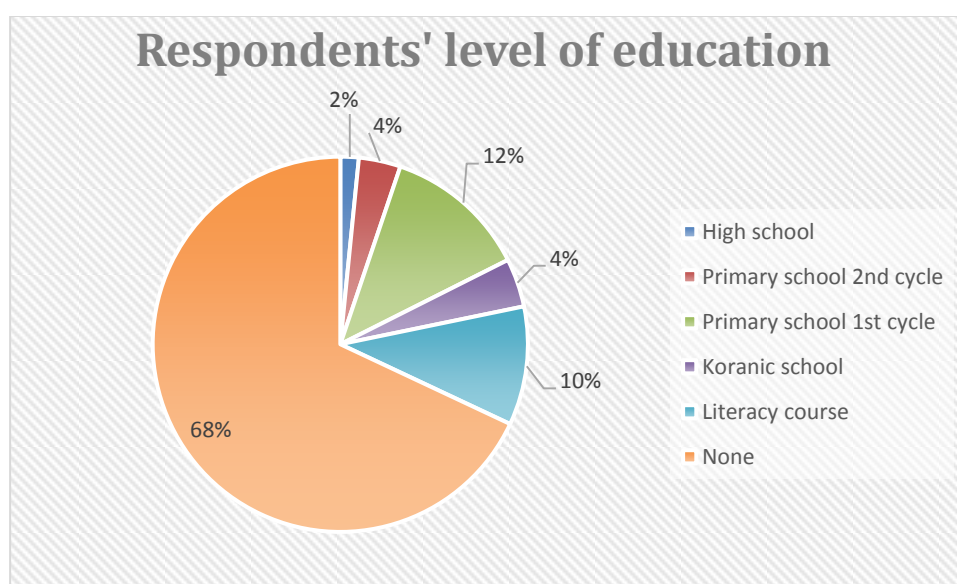
The data reveal that 58% of respondents are women this is explained by the approach of the project, which considered the gender aspect in its implementation. This is because women are the most vulnerable in the community and they oversee household management. Emphasis was placed on the involvement of women in the implementation of the project.

*Graph 1: Distribution of interviewees by sex*



Source: Final Evaluation of WYL Project, April 2019

Graph 2 : Respondents' level of education



Source: Final Evaluation of WYL project, April 2019

Almost half of the people surveyed are from the Koulikoro region (46%), we have a similar situation for the Segou region (45%) and finally in the Mopti region the beneficiaries surveyed are about 9%. The low rate in the Mopti region is due to insecurity in the Koro and Bankass circles that were in the sampled areas.

About education, 68% of respondents have no level of education followed by 12% who have primary level (1st cycle from 1st year to 6th year) after 10% have taken literacy classes. Men seem to have a little more formal education than women.

Table 2: Main activity of the interviewees

Occupation/Main activity	KOULIKORO	MOPTI	SEGOU	Total
Farmer	82%	40%	47%	63%
Artisan	0%	0%	1%	0%
Other	1%	0%	0%	0%
Trader	2%	3%	7%	4%
Pupil or student	0%	0%	0%	0%
Breeder	0%	2%	1%	1%
Housewife	13%	53%	42%	29%
Civil servant / State employee	0%	2%	1%	1%
Worker maneuver / Help to the boss	1%	0%	0%	0%
Retirement / OFF	0%	0%	1%	1%
Non-state employee	0%	0%	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Final Evaluation of WYL Project, April 2019

The survey defined the main occupation of the beneficiaries as the activity from which they derive their main income. The results show that the majority (63%) of beneficiaries have agriculture as their main activity. Then, housewives with 29% are the second category. Traders follow far behind, with barely 4% of respondents carrying out this activity as their main occupation. This activity is mainly performed by women in addition to household chores.

In general, WYL has had the expected results. Across the various activities undertaken, communities in general report to 99% that the WYL project has helped to improve their resilience through the improvement of food security, increase of household assets, creation of microenterprises and strengthening of their area of change in relation to the 3As. Individually 98% of beneficiaries improved their resilience. Communities have greater access to climate information through sandji and senekela platforms and different rain gauges at their village level.

Thanks to the grants provided by the project in relation to the activities defined in the resilience plan associated with the other activities (market gardening, small ruminants breeding and credit savings), the project contributed significantly to the improvement of the income and the diversification of the sources of income. The proof is that 98% of the beneficiaries say they have increased their income.

*Table 3: Increase in income through project activities*

<b>Regions</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
KOULIKORO	97%	3%	100%
MOPTI	92%	8%	100%
SEGOU	99%	1%	100%
<b>Total</b>	<b>98%</b>	<b>2%</b>	<b>100%</b>

*Source: Final Evaluation of WYL Project, April 2019*

*Table 4 : Results of impact and outcome indicators*

<b>Indicators</b>	<b>Results</b>
% of beneficiaries whose resilience has improved with the support of WYL (KPI4)	<b>98%</b>
% of surveyed beneficiaries who report using climate information (weather forecasts or advisory services) to make livelihood decisions with project support.	<b>51%</b>
% of surveyed beneficiaries who claim to have applied climate smart practices with project assistance	<b>89%</b>
% of beneficiaries surveyed who report having increased their income from activities supported by the project.	<b>98%</b>

Source: Final Evaluation of WYL Project, April 2019

In a realistic evaluation context, we examined the most important influence on the success of an intervention in activating a change process (often called a "mechanism") that resulted in an outcome. To understand "causality" therefore means to understand how context influences "mechanisms" and results. Interventions interact with a series of mechanisms that work in different ways in different contexts. Because people respond to the intervention according to their context, we used our ICMO (intervention-context-mechanism-result) configuration table to better understand, in a linear context: "How, where, when and why WYL interventions work and how can they be used to learn / how to replicate good practice?"

In the methodological approach, each strategy was reviewed to better understand the mechanisms that allowed the project to achieve the different results.

## Strategy 01

As part of Strategy 01, the project addressed concrete actions (interventions) through mechanisms to achieve tangible results. The project targeted the most vulnerable groups, especially women. To see what worked well for whom, how and why, we observe different results. At this level, we will focus on the key activities of Strategy 01.

Table 5: ICMO Intervention- Context- Mechanism- Outcome (Strategy 01)

ACTIVITIES	CONTEXT	MECHANISM	OUTCOME
<ul style="list-style-type: none"> <li>▫ The establishment of the CVACC and the monitoring committee</li> <li>▫ Facilitate the participatory self-assessment of risks and vulnerabilities to climate shocks and tensions and opportunities to increase resilience by communities; then develop a resilience building plan based on this analysis.</li> <li>▫ Facilitating community engagement with their local municipal council to include their resilience priorities in the Municipal Development Plan (PDESC).</li> <li>▫ Micro granting to communities to implement an identified CCAM priority in their process of analysis and planning of the CCAM.</li> <li>▫ Facilitate community-to-community exchanges using the analogue village approach or share lessons learned from key experiences.</li> <li>▫ Training community leaders and CVACC on climate change</li> <li>▫ Public reporting of activities and accountability at village level with the participation of elected officials and technical services and the general</li> </ul>	<p>The changing climate change environment over time with a significant impact on natural resources and the community making them increasingly vulnerable especially women and children is a reality in the Sahelian areas; the decline in production and productivity; the weak interaction between the communal council and the communities.</p>	<ul style="list-style-type: none"> <li>▫ Our interventions give communities the capacity to analyze and plan to become more resilient to the shocks and stresses of climate change.</li> <li>▫ Community knowledge of existing climate change adaptation practices, vulnerabilities and opportunities creates a framework for community-driven action supported by local government to build resilience.</li> <li>▫ The provision of community grants has enabled communities to build resilience to the effects of climate change through increased revenues and management capacity.</li> <li>▫ Exchanges in similar villages have allowed communities to have greater awareness to facilitate behavior change and to anticipate and adapt to the adverse effects of climate change through the practice of climate smart agricultural activities.</li> <li>▫ Training of community leaders on climate change issues facilitates the inclusion of community resilience plans in the PDESC.</li> <li>▫ The public accountability sessions were an opportunity to inform the community about the activities carried out by the project through the CVACCs in a transparent environment, which contributed to the</li> </ul>	<ul style="list-style-type: none"> <li>▪ Communities are engaged (by increasing the resilience of their vulnerable members through) a thoughtful implementation of resilience grants and subsequent activities.</li> <li>▪ Communities actively engage their local government to include their resilience priorities in local development planning (PDESC).</li> <li>▪ Communities continue the learning process (on how to increase their resilience) through their CVACC or other social structures without project facilitation.</li> <li>▪ Communities show better social cohesion.</li> <li>▪ Public restitution has created trust between the CVACC and the community. This has allowed the community to become more interested in community activities.</li> <li>▪ CVACCs carry out project activities on behalf of the community</li> </ul>

ACTIVITIES	CONTEXT	MECHANISM	OUTCOME
community population.		improvement of the process of accountability, good governance and in parallel the dissemination of the technologies promoted by the project.	

Through the lessons learned from RIC4REC, there is a mechanism that would have allowed a better ownership of communities and local authorities of project achievements. In this context, it has been noted that since the selection of villages, local authorities have been integral stakeholders in the process. The project trained local elected representatives on the concepts of climate change analysis and related tools. This approach contributed not only to their capacity building but also to their understanding of the objectives of the WYL project. The innovation for this phase was to develop memoranda of understanding (MoU) with the town halls in connection with the activities of the WYL project, it is considering this stage that a Communal Committee for Adaptation to Climate Change (CCACC) were established at the level of each town hall of the ten (10) communes of intervention. Each committee is made up of four (04) people, they have the responsibility to follow the various activities at the village level and to participate as well.

Also, with the aim of facilitating communication between the villages, the project and the town hall, it has been set up Village Adaptation Climate Change Committees (CVACC) consisting of 10 people on average. For women to be able to participate in the decision-making process and express their concerns, the project has focused on the gender aspect where the group contains at least 30% of women some localities are at 50%. This committee's role and responsibilities are to provide a communication interface between the village and local elected representatives, to monitor activities and manage grant funds. Depending on the following contexts zones, the constitution of these groups was made by consensus in village assembly. The groups were made up of representatives of young people, women and notable people in the village. CVACC also contributes to good governance at the village level, conflict management, the process of transparency and accountability to communities. 99% of those interviewed are aware of the presence of the group.



The project approach **with community involvement at the grassroots level was the key factor in the success** of the project. It has led to better ownership of project activities by the beneficiary communities. It has borne fruit through a strong involvement of community members. The training of CVACC on the aspects of climate change has created an awakening of conscience because after restitutions were made to the communities of origin by the recipients of these formations. This awareness has also helped to facilitate the implementation of the project in relation to the means of mitigating shocks and risks related to climate change. The proof is that 99% of the surveyed beneficiaries have heard about the CC, according to the community it is most manifest by the following points: deforestation, irregular change of temperature, precipitation and winds.

Each village conducted a participatory diagnosis in the presence of the CCACC to make their resilience plan related to the aspects of climate change. This diagnosis has further improved their awareness of how aspects of CC affected them, how they continue to affect them, and how they will affect them if nothing is done. Depending on their terroir, they proposed a resilience plan that highlights all their difficulties and the different solutions to solve them. It is this resilience plan that Blumont and its partners have used to carry out resilience actions for the community. Blumont decided to fund one of the priorities in their resilience plan based on available resources. On average, 2,500,000 FCFA were granted to each community. According to the testimony of the beneficiaries, *"we have never seen such a project"*. Because it was an innovative approach for them, especially since they had to choose themselves the activities they wanted to see financed. Indeed, projects often come with defined activities even if it does not fit directly into their priorities. The activities financed at the level of the various beneficiary communities were fattening (cattle, sheep and swine) and machines (threshing machines and multifunctional mill). This choice is not fortuitous because the process for fattening is a short cycle and the period of purchase coincided with the harvest periods so there was the availability in terms of livestock feed (crop residue). Since the grant is dedicated to the community, so that everyone can benefit, the CVACC in common with the inhabitants held meetings to select the beneficiaries of the first cycle. To do this, criteria were defined and then they proceeded to draw lots for the granting of animals. Always to improve the transparency and the process of governance, they established rules, so after the sale of each head, the person reimburses the CVACC the purchase price of the animal with a low interest rate that varies from 1,500 to 5,000 FCFA depending on the type of animal and the rest of the profit belongs to the owner. The amount collected will be used to buy new heads for other people who have not benefited so forth. 79% of fattening beneficiaries report having increased their income through this activity.

This method allows them to quickly generate income after 03 to 04 months. What can be noted as a weakness in this process is that some beneficiaries report that the amount at purchase was very high, which significantly reduces their profit margin. This is due to the approach of the project, not to entrust the money directly to the community in connection with their policy and procedure. And at the same time, the group purchase where different villages are on the same market at the same time has contributed to considerably increase the purchase price. Because with a rising demand on the market and traders having the information that it is the project that finances, they have increased prices. In some cases, the market could not cope with the demand from which the purchase was calibrated over several days.

To contain this price spike, a market study must be done beforehand to see the capacity of the market to cope with such a demand. And it will stagger the purchase on time, it is to say in several stages not to cause a price surge. This may have a negative impact on neighboring villages that have not received these subsidies and therefore make them more vulnerable. It should be noted that some communities have already started their second cycle for fattening.

CVACCs are well appreciated by the community. For example, the community of Paridara (San Cercle, Ségou Region) reports that *"The community thinks that the CVACC is a torch in the fight against climate change. It conducts actions for the benefit of the village community. Because all project activities are for the benefit of the community"*.

The CVACC also holds monthly meetings to review the activities and challenges to find appropriate solutions together. And often, they hold exceptional meetings according to reality. To improve transparency in management, the CVACC held public renditions with the various stakeholders during which the community questions and asks questions related to the implementation of the project and the different results achieved and the sustainability strategies. This innovative approach made it possible to have more involvement of the communities and to better appropriate project activities. 89% of respondents say that public renditions have contributed to improving community confidence in CVACCs.

In summary, it turns out that Strategy 01 activities are the driving force behind all other activities in the two (02) other strategies. The participatory diagnosis and the involvement of local leaders in the whole process and the agreement that binds them to the project with greater responsibility were the heart for better ownership by the communities. This approach has made the project unique for each community. WYL is perceived by communities as their project, because it is they that have defined the various activities to be undertaken in their communities to strengthen their resilience. Other community priorities in their resilience plan that are beyond the reach of WYL's portfolio were submitted to the municipalities for their integration into the PDESC. This integration will enable the town hall and / or the technical and financial partners to direct their intervention actions to the villages that need them. Villages also use this tool (resilience plan) to advocate.

### **Strategy 02:**

As part of this strategy, various actions have been undertaken to facilitate access to climate information and to improve producers' knowledge of new agricultural practices related to climate change. All these actions converge to improve food security and reduce greenhouse gases, helping to improve resilience. The way in which these actions led to the different results is analyzed in the ICMO table.

Tableau 6: ICMO Intervention- Context- Mechanism- Outcome (Strategy 02)

ACTIVITIES	CONTEXT	MECHANISM	OUTCOME
<ul style="list-style-type: none"> <li>▫ Increase access to and use of climate information coupled with climate-smart agricultural advice at the request of farmers through the ORANGE Mobile Phones service platform called Sandji / Sènèkèla.</li> <li>▫ Training farmers on climate-smart agriculture.</li> <li>▫ Use of adapted seeds.</li> <li>▫ Facilitate community-to-community exchanges using the analogue village approach or share lessons learned from key experiences.</li> <li>▫ Installation of demonstration plots in FMNR, improved fallowing and forage crop integration technics.</li> </ul>	<p>Given the low rainfall, the uneven distribution of rains, the continuous degradation of agricultural land, demographic pressure, unsuitable agricultural practices, the lack of knowledge of new farming techniques, the low coverage of villages by technical agents of the State, the project promoted the techniques of intelligent farming</p> <p>And when there are external pressures or motivations to apply the training and the participants already have an internal motivation for the application of technologies related to their needs and environment.</p>	<p>WYL support to learn how to use climate information and make climate information more accessible to farmers has led to more adaptive farming decisions and practices that have led to stable or higher production in erratic rainfall and suboptimal rainfall scenarios.</p> <p>The provision of a local agent facilitated support for better decision-making</p>	<ul style="list-style-type: none"> <li>▪ Beneficiaries have increased their access to climate information by using Sènèkèla and Sandji.</li> <li>▪ Beneficiaries are better equipped to have climate information and make better decisions.</li> <li>▪ Beneficiaries have adopted at least one new climate-smart agricultural practice.</li> <li>▪ Beneficiaries have increased production or reduced losses in climate-stressed seasons and thus improved their livelihoods.</li> <li>▪ Communities have become aware and have adopted practices such as intercropping, contour bunding, micro dose, use of adapted seeds, etc.</li> </ul>

The effects of climate change are negatively impacting the lives of millions of agricultural producers who derive their means of subsistence from the land. To help these communities affected by the effects of climate change, the WYL project has supported communities in relation to these different issues. During the participatory diagnosis at the beginning of the implementation of strategy 01, these problems were mentioned by the communities. The interviewees discussed the consequences of climate change on the decline of their production through irregular rains.

The activities of this strategy were much appreciated by the different communities. It has manifested itself with the support of communities through different innovative approaches that adapt to the context of the WYL communities.

The project through its partners like ICRISAT and Orange Mali have played a key role in the success of this strategy. The CSA expert trained 5 producers per community on environmentally friendly agricultural technologies while minimizing the effects of climate change and production costs. These 5 producers are called demonstrator producers, who each train 7 other people at the community level called replicator producers. This training of trainer approach has enabled large-scale dissemination of agricultural techniques and technologies within the community and surrounding villages.

Other technologies taught included intercropping, composting, Zai, halfmoon, organic and mineral microdoses, improved seeds, and contour bounding (ACN). Awareness of the issues and impacts of the effects of climate change was the catalyst for the application of these different technologies by producers. Especially since 63% of the beneficiaries have Agriculture as their main activity. The most preferred technologies are improved seed 83%, composting 81%, followed by organic microdose (48%) and Zai (30%). Motivations for the application of these technologies are not only adapted to their context but also to cost. For example, composting is an activity that requires considerable physical effort, but given its added value in terms of improving soil fertility and production, it is well appreciated. The materials that make it up are available locally and minimize the cost of buying mineral fertilizer (which is a rare commodity now). Fattening activities (Strategy 01) and breeding small ruminants (Strategy 03) contribute considerably to this activity because the feces of these animals are used in the production of compost. With the early cessation of rains, improved seeds are the most adapted to our context. A testimony during a focus, where communities testify that with improved varieties, they get at least as little production as it is with the early cessation of rains. But with our local variety, we get practically nothing. Recall that the high use of improved seeds is due firstly to the availability of seeds to the communities by the project to make them aware of the product and its importance.

The exchange visits were a catalyst for the adoption of different techniques and technologies. The inhabitants of M'Pèbougou declare that their neglected lands have decreased with Zai, mineral fertilizer expenses have decreased with organic microdose, composting, fattening and livestock farming.

Crops in rural areas are mainly dependent on rain. But with rain irregularities because of climate change, how can I have information on rainfall forecasts at the village level to make adequate decisions to minimize losses related to my livelihoods? This is where the sandji<sup>1</sup> and senekela service

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<sup>1</sup> [Sandji](#) is a service that provides daily rainfall forecasts by SMS within a radius of 3 km

from the Orange Mali telephone operator comes in. The Sandji service allows registrants to receive SMS information from daily rainfall forecasts. According to the community's testimony, the use of the information goes beyond what they expected. They used it to make decisions related to agricultural practices for sowing, phytosanitary treatment, fertilizer application, travel planning, washing and spreading market garden products for drying. The holder of the information has a more important place in the society because it becomes a focal point because all the producers who are neighbors to his field come to inquire with him. At the same time, it contributed to the improvement of social cohesion as some volunteered to disseminate information voluntarily at the village level.

When we have information (Sandji) we are less vulnerable. It allows us to make appropriate decisions and minimize our losses. The evidence is that 51% of beneficiaries report using climate information in their decision-making process. For example, *"we have floodplains where we go out to feed our animals usually accompanied by children so when we have information that there is a high probability of rain, we keep children and livestock at home that has allowed us to significantly reduce the loss of lives and animals"*. This tool has led to a change in behavior in the decision-making process of producers. Although there is a cost of 25 FCFA per SMS, producers continue to use the service and those in the surrounding villages also do so. This is due to the accuracy of the information up to 80% depending on the community. Communities do not have much confidence in the information provided by the national service that produces the meteorological information and this information is produced at the regional and circle level but not at the local level.

The Senekela service is complementary to the Sandji service, through a call center where agricultural advisors give information on food prices on the market, advice on phytosanitary treatments, seasonal long- and medium-term forecasts, adequate agricultural practices, etc. This platform makes it possible to make better decisions in terms of management of its plot or sale of grain products or market gardeners. Senekela's call costs 25 FCFA / min. These technologies allow producers to have the information at their fingertips.

One of the key factors that further boosted access to information on CSA technologies and Sandji / senekela services was the organization of exchange visits and a farm of the future approach through analogue villages. Exchange visits helped inform surrounding villages and non-beneficiaries in the community to see demonstration plots on which different technologies were applied. It is easier to believe in seeing according to the communities and what they saw in the different plots proved to them the added value of each technology. Because of the exchange visits, many people volunteered to use at least some of these technologies for the upcoming campaign, especially composting. During the field survey for the final evaluation, we found that some producers have already made their compost pit. One of the catalysts through the exchange visits is the trust between producers within the different communities. When the evidence is conveyed by itself, it gives more credibility.

To further raise awareness of climate change issues and improve knowledge sharing in different contexts, the project has initiated a farm of the future<sup>2</sup> approach. According to the communities, it consisted in making a community climate diagnosis to characterize the different characteristics of their terroir today (present) and 30 years before (past) to make a comparison. The villages of Manta and M'Pesseribougou in Kolokani circles (Koulikoro region) were selected for diagnosis. The exercise

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<sup>2</sup> [Farm of the futur](#) is an innovative approach to creating greater awareness of climate change issues and creating a framework for sharing lessons learned.

was to bring out the mapping of the different villages in the past, the present and the future if nothing is done. The project's CSA expert used a simulator to find analogues of these villages. As a result, at least one beneficiary from the 30 intervention villages was brought to similar villages to exchange with these different communities on the means and techniques used by them to adapt and fight against the vagaries of climate change. This innovation amazed the producers because they went to the research station of the Institute of Rural Economy (IER) of Cinzana (Commune of Cinzana-Gare, Region of Segou) to see how the improved seeds are produced and the future supply locations. Beneficiaries from the three (03) intervention regions took an initiative at the end of the visit to create a contact list and exchange among themselves even after the end of the project. This approach has also contributed to a strong social cohesion. The different participants from different localities were the eyes and ears of the different communities. A video was made to capitalize on the lessons learned from this visit which will serve as a memory and was shared in the communities.

Activities related to Strategy 02 through the above mechanisms in different contexts have yielded concrete results. Through improving producers' knowledge of various CSA techniques and technologies, access to climate information with greater precision, exchange visits and a farm of the future approach have contributed significantly to improved production and productivity, food security and decision-making mechanisms. Communities have strengthened most of their area of expertise such as their knowledge and attitude, capacity and skills, partnership and their decision-making process. 97% of recipients said that these CSA technologies have contributed to improving their resilience. The awakening of consciousness associated with these different skills acquired allowed them to improve their capacities of adaptation, anticipation and absorption (3As) in connection with climatic shocks.

Table 7: Contribution of CSA Technologies to Enhancing Resilience

Regions	Yes, all these technologies	No / none of these technologies	Total
KOULIKORO	95%	5%	100%
MOPTI	100%	0%	100%
SEGOU	99%	1%	100%
<b>Total</b>	<b>97%</b>	<b>3%</b>	<b>100%</b>

Source: Final Evaluation of WYL Project, April 2019

Table 8: Rate of adoption of at least one CSA technology by region

Labels lines	Yes	No	Total
KOULIKORO	91%	9%	100%
MOPTI	76%	24%	100%
SEGOU	90%	10%	100%
<b>Total</b>	<b>89%</b>	<b>11%</b>	<b>100%</b>

Source: Final Evaluation of WYL Project, April 2019

**Strategy 03:**

Regarding the project's third strategy to increase resources and access, the project initiated a wide range of activities throughout its implementation. To understand why and how the success of certain activities has been achieved, discussions with members of CVACC, mixed groups (market gardening

group, cereal bank group, small ruminant breeding group and the credit savings group) have been organized to address these key issues.

Table 9; ICMO Activités - Contexte - Mécanisme- Résultats (Strategy 03)

ACTIVITIES	CONTEXT	MECHANISM	OUTCOME
<ul style="list-style-type: none"> <li>▫ Long-term land-use rights formalized by local authorities</li> <li>▫ Support agreement based on business planning and leveraging of member and non-project resources</li> <li>▫ Production cycle training</li> <li>▫ Installation of irrigation system</li> <li>▫ Training on vegetable production</li> <li>▫ Business plans, skills and credit training</li> <li>▫ Financial support for improving granaries</li> <li>▫ Post-harvest handling and storage training</li> <li>▫ Startup grant for first-year marketing activity</li> <li>▫ Training on Livestock husbandry and organisation</li> <li>▫ Establish business plans</li> <li>▫ Financial support to start-up herd</li> <li>▫ Credit and financial management training</li> <li>▫ Technical support to implement first year marketing activity</li> <li>▫ Training and supply of bookkeeping, passbooks and management record keeping materials.</li> <li>▫ Establishment of governance and management procedures, business planning for growth.</li> <li>▫ Identification of microfinance institution.</li> <li>▫ Quick assessment of microfinance institution.</li> <li>▫ Selection of microfinance as potential partners.</li> <li>▫ Training and preparing savings and credit group to be able to negotiate with microfinance institution.</li> <li>▫ Facilitating client relationship between beneficiary enterprise groups and formal</li> </ul>	<p>Given the socio-cultural context in which Mali evolves. It is the men who are the landowners, the women do not have access to the land. The fact that women do not have access to land brings limits in terms of securing land and the low level of investment in these plots that can be removed at any time by men. Difficult access to water to ensure adequate production to access the market. After the winter harvest periods, women practically do not carry out any income-generating activities, which makes them more vulnerable to shocks.</p> <p>The cereals obtained at the end of the winter season cannot cover the whole year. There are lean periods when the household granaries are empty which push the youth to go to the rural exodus to generate some income to be able to compensate for this deficit of foodstuff but in parallel this rural exodus expose them to more vulnerability in the big cities.</p> <p>Sources of income are not generally diversified, which further exposes communities to risks in the face of shocks related to climate change. Improved sources of income and access to funding can make a significant contribution to keeping the community on the ground and better contributing to the development of their communities.</p>	<p>To facilitate this process in a participatory mechanism, a community-based diagnosis was conducted to identify priority activities related to climate change aspects. These activities were chosen to mitigate these effects and in parallel increase community income and access markets. To ensure appropriate behavior change, lessons learned through RIC4REC highlighted priority actions that will enhance the resilience of vulnerable communities, ie a combination of activities that will reach all vulnerable segments, mainly women and children.</p> <p>It is with this in mind that the association of local elected representatives in the implementation process was an innovation to grant land use rights to women by involving village leaders so that they can fully enjoy the exploitation of these plots and in parallel financial partners as we have been able to install modern irrigation systems to allow them access to water and produce products throughout the year. Thus, they have the availability and accessibility to the surrounding markets to sell their product and in parallel contributes to the improvement of nutritional status at the community level. In terms of change, this initiative is more women-friendly, improves social cohesion and</p>	<ul style="list-style-type: none"> <li>▪ Beneficiaries increased their incomes.</li> <li>▪ Beneficiaries are better equipped to face risk and choc to climate change.</li> <li>▪ Beneficiaries have access to market.</li> <li>▪ Beneficiaries have improved their food security.</li> <li>▪ Beneficiaries have increased production or reduced losses in climate-stressed seasons and thus improved their livelihoods.</li> </ul>



ACTIVITIES	CONTEXT	MECHANISM	OUTCOME
<p>micro-finance institutions.</p> <ul style="list-style-type: none"> <li>▫ Facilitating the contact with formal micro-finance institutions.</li> <li>▫ Facilitating the first meeting between credit / saving groups and micro-finance institution.</li> </ul>		<p>community-level tensions.</p> <p>To minimize the risks of food insecurity, cereal banks have been supplied with cereals to cover lean periods for the most vulnerable households. To enable them to access cheaper goods than those at market level and / or in the form of credit. This community-based initiative will further strengthen the capacity of communities to be more resilient.</p> <p>Since Mali is a country with an agro-pastoral vocation, actions to increase the number of livestock through small ruminant breeding activities have been done in the form of revolving and multiplying herds so that most of the community can benefit from them. Because these animals are used as savings at the household level. They are sold in the event of shocks or need of liquidity for problems at the household level. Milk produced by animals is also used as a dietary supplement.</p>	

Given the volume of activities undertaken under this strategy we will approach them through each sub-activity and then discuss the links between them. Given the lessons learned from RIC4REC, it noted the problem of women's access to land, poor knowledge of business management and its components, difficult access to water, weak organization of women in savings. -credit.

### *Market gardening group:*

Women are more vulnerable to poverty and discrimination than men in accessing agricultural land. Their rights are often masked, their prospects limited, and their voices silenced. There are few opportunities for rural women both economically and for access to training and self-esteem. This is particularly due to the persistence of gender inequalities in access to income, training, basic social services, economic opportunities and the participation in public spaces of decisions due to the socio-cultural constraints that they have even the hard skin.

In recent years, market gardening has become increasingly important in Mali's agriculture.

Vegetables are an important source of vitamins and allow for a balanced diet. They also constitute, even on modest surfaces, a cash crop for producers and particularly women.

It is in response to these different challenges faced by women that the WYL project through the CVACC participation and involved women as members of these groups to identify their problems and difficulties and to propose appropriate solutions. to be included in their resilience plans and in the PDESCs. They were integral parts of the diagnostic process to influence the decisions made. Thus, the installation of vegetable gardens was chosen by many communities. Given the resources of the project, it was retained the rehabilitation and / or installation of a vegetable garden with a solar irrigation system by municipality.

In the context of women's empowerment, the involvement of local authorities since the beginning of the project has made it possible to grant acts of securing plots for women. This commitment has created more confidence for women who feel safer to exploit these plots. After the harvest season, women have no other activity to do. They also have no other source of income than that given by their husbands and the small quantities of cereals or legumes sold at the end of the harvest. They oversee the education of the children, their food, clothes, health and other. Women are unable to engage in income-generating activities (IGAs) for lack of resources. This makes them more and more vulnerable, resulting in a high rate of people moving out of the country to the big cities after the harvest season with all the risks involved.

The arrival of this market garden generates a series of hope for the community, especially women. In some villages, the exploitation of the gardens was abandoned because of the drying up of the wells, or the malfunctioning of the installed solar system or the pump. Before the installation, where the rehabilitation of the gardens, their women received a series of training courses on vegetable production by combining CSA technologies respectful of the environment, the management of the market gardening site, the development of a simplified business plan and sales techniques. The average size of the sites is 01ha. The WYL project also supported women with improved seeds.

For transparent management and sustainability of project achievements, a management committee has been set up. This committee is responsible for ensuring the management of resources, to collect water charges, manage conflicts within the group and to proceed with building the capacity of other

members. The different fees for the water fee are used for the maintenance of the garden and for a possibility of future extension to increase the number of beneficiaries. The garden serves the entire community because at least one woman in each concession has access to a portion in the garden. The committee has established codes of conduct and regulations that all members must respect.

According to the women of Paridara (San Commune), this garden is their blossoming. Because through this garden, we have access to land, water and fresh vegetables all year round at the village level and we can supply the neighboring villages or sell on the weekly market of San. It has created a new source of income which allows us to join the credit savings group to pay our weekly contributions and claim credit for other income-generating activities and at the same time diversify our source of income. We are also able to provide necessities for our children and access basic social services. In addition, this empowerment has minimized the tensions in the homes where the woman is no longer obliged to ask everything to her husband.

In the village of Youré (Mopti region), communities had difficulty accessing water even for drinking water it was complicated. The rehabilitation of their irrigation system was appreciated by the whole community. Not only does this water serve to irrigate the garden but serves as drinking water for the community and the animals. Through this action, the community of Youré feels less vulnerable.

Gardens have helped to improve social cohesion because women meet and exchange news and at the same time as they bring their child, they have fun with each other too. The fact that women have more occupation minimizes hawking between women and therefore less conflict and less rural exodus. The irrigation system with solar panels dewatering significantly reduces the watering time and the effort provided by women to transport water seals or watering can over long distance. This saving of time allows them to allocate time for other activities and to take care of their household. In addition, 90% of market gardening beneficiaries say that this activity contributes significantly to improving their resilience.

As assumption in the theory of change, this activity has enabled women to establish a company to have market access, access to water, improve their income and access to CSA technologies. The project awarded tricycles to the market gardening group to facilitate the transport of their market product to markets. But this activity has produced unexpected effects including improving community access to water, the use of tricycles to facilitate the evacuation of patients to health centers and for service delivery by giving the bike in rental for an amount. The availability of vegetables throughout the year contributes to the improvement of the quality of the dishes in parallel with the improvement of the nutritional situation.

Also, one of the innovations was drawn from the recommendations of the final evaluation of the project RIC4REC which was to train a few people to ensure the maintenance of the garden equipment, that is to say the small current breakdowns so it serves to strengthen the capacity and competence at the local level.

But a limit was reported by the communities on their assessment of the quality of the fence in the gardens. Because they can not prevent the roosters from returning to the garden level. He recommends having quality wire mesh with smaller mesh and better iron quality. This will ensure more durability of the garden.

### *Cereal bank group:*

A cereal bank is a basic community institution that buys, stores and sells basic grain foods.

Most cereal banks offer farmers the opportunity to reap their harvest in a community warehouse while waiting for price increases before selling their surplus on the market.

Cereal banks can also benefit the most vulnerable people in the community. Cereals purchased at the time of harvest are resold during the food lean season at an affordable price.

Another system is for everyone to deposit their grain and then, in times of crisis, grain is made available to community members. Every person who participates can receive cereals when they need it most.

When food supplies are exhausted, an empty bank can serve as an emergency store for food supplies.

Food security is based on four key factors: 1. availability of food, 2. access to food (economic access and physical access), 3. quality and nutritional value of food, and 4. stability of food supplies.

A cereal bank alone can not solve the problem of food security. It is always important to explore ways to improve the other four elements of food security:

- Good agricultural practices to improve the quality and quantity of food production, animal health and livestock management;
- Diversification of livelihoods;
- Market gardening;
- Creating small businesses to reduce people's vulnerability.

Since the cereal bank is there for the whole community, among the respondents 93% say they can buy cereals at the level of the cereal bank group. 93% of the beneficiaries of the cereal bank say that this support has improved our stock / situation of food security. Most of the management system in the different communities sampled is that the price of cereals will be made to be lower than the price of those in the market at the time of sale to the beneficiary community.

These different explanations prove that livelihood diversification through WYL project activities better prepares communities to be more resilient to climate change shocks. Which makes a better ownership of the project by the members of the community. These activities were chosen by consensus in relation to their resilience plan. A management committee has also been set up for better management in a transparent way. As mentioned in the ToR limits, given the duration of the project it is difficult to measure the value added in terms of income and food security in the community. Because the stores were supplied recently. It will be necessary to wait for the closure of at least one cycle to better appreciate its impact. But nevertheless, it is a guarantee and a deep hope to communities. To better appropriate and show their ownership of the project activities, the communities are actively involved in the construction and renovation of the stores. They provided local labor for their design.

This interaction between the different intervention strategies of the project is becoming clearer. It proves the need for complementarity of actions chosen at the community level to prepare them to

mitigate the stresses and shocks related to climate change. For example, through the community diagnosis where we have mapped our community and hazard mapping we have better chosen the location of grain banks so that they are not devastated in case of flood because the bank serves attic for the entire community. This action has really contributed to the absorption of climate change shocks. 94% of the interviewees are in favor of the idea that the cereal bank is a means of strengthening food security in their community.

#### *Group breeding small ruminants:*

Mali is a country with an agro-sylvo-pastoral vocation. Livestock is a favorite activity of communities. In vulnerability diagnoses, communities have identified the need for this small ruminant farming activity.

The project's approach was to provide one (01) male and two (02) female small ruminants (goat or sheep) to each recipient. The objective is to build a flock of livestock with the beneficiary. This livestock is used as savings within households. In the event of a shock or crisis, the beneficiary may sell part of it to support himself as an adaptation strategy while preserving his dignity by not having to go elsewhere to incur debts.

For most of the community to benefit, the recipients of the first cycle are required to return three (03) pups also after the calving to CVACC members. Who in turn will put these 03 heads at the disposal of other members of the community who have not benefited. This approach will continue to maximize the number of beneficiaries. After restoring the three (03) heads, the rest of the flock belongs to you and you can continue to multiply it at will.

In the focus groups, the communities very much appreciated this activity. Here are some of their stories that show the added value of this practice. *"So, benefiting from small ruminants, not only do we use the excrement of these animals for compost but also animal milk that is used as a good dietary supplement by households".*

99% of small ruminant beneficiary's report that this support has increased their income or assets. And 99% of respondents say that this activity helps to improve their resilience.

One of the testimonies of the unexpected results of the WYL project through this small ruminant breeding activity *"Yes, one of the results is the reinforcement of social cohesion. And, we saw that people who did not even have the means to buy a rooster, but with the support of the project, these are found with 03 sheep, all belonging. It's really a few things, which were unexpected. (Village of Parana Bobo, municipality of San, Circle of San) "*. Always the focus is on gender mainstreaming, many of the beneficiaries of this activity are women.

However, it should also be noted that the purchase of small ruminants has occurred in the same way as the purchase of fattening animals. So, it had a negative impact on the market with a strong demand on the market that helped to increase the price of the heads. According to the communities, if the project had given them more confidence and given them the money, they could have better negotiated, bought in stages to have more heads and therefore more beneficiaries. So, for a next phase, it will be necessary to conduct a market assessment and give more responsibility to the CVACC in the purchasing process and calibrate the purchase period for small ruminants.

The increase in livestock and fattening activities causes another constraint during the drought period. This is how to make water available to growing flocks. It will be better to provide a watering place in the different villages for the implementation of similar projects.

#### *Credit savings group:*

To facilitate this activity, WYL has trained members of the community on good practices and management of a credit savings group. This activity, generally conducted by women, is a means for women to have easy access to credit for income-generating activities. But how to access credit if we do not have the resources to pay the weekly contributions?

Therefore, the project approach is to be welcomed. Because through the different activities (fattening, raising of small ruminant, market gardening, CSA practice), we have been able to improve our income which allowed us to join the groups of tontines put at the level of the different villages. In some villages, there was not even a tontine group as in Dessere (commune of Fatoma, Mopti region) before the support of the project. They have put in place clear management rules for the long-term sustainability of the system.

89% of the beneficiaries say they have improved their income through the loans contracted with the savings and credit groups set up at the village level through the WYL project. The grant of a fund of 100,000 FCFA by the project team in kind (bottle of oil, sugar, tea, soap, etc.) to credit savings groups (tontine) and which were sold by the groups. The funds generated from this sale were used to further fund their fund and therefore to increase their capacity to grant more credit and value amounts.

The vision of the project was to put them in touch with the microfinance institutions. But the good collaboration with the microfinance institutions has not succeeded because the information collected reveals that the communities do not trust the microfinance institutions given the history. Because some of these institutions have gone bankrupt in the past and / or the conditions for granting credit are not within the reach of the community. So, she prefers to set up credit savings groups (tontines) in their community, which they trust and easily grant credits between them.

## 12. Lessons learned

The WYL project was more innovative through the lessons learned from RIC4REC. Evidence has shed light on the need for a combination of different activities within a community to improve the resilience of communities to the challenge of climate change.

The formation of micro-enterprises within communities, the establishment of a cereal bank and the improvement of communities' knowledge have increased their ability to adapt, absorb and anticipate. A transformative aspect begins to appear through the combination of the different activities with an inter-synergy between them push the communities towards an emergence. Local leaders say communities that have received support for the WYL project are more open to innovation than other communities.

We tried to test the hypothesis of seeing the correlation between people who had benefited from more activities were more resilient than those who had benefited less. It turns out that there is not a strong correlation, the fact that the person benefits from the appropriate action in relation to its context, it happens to be better resilient. The proof is that the people who benefited as much from less action than from more action all responded in the affirmative that the project helped to improve their resilience.

Table 10: Correlation between stratification and the level of resilience of individuals

Strata	No	Yes	Total
Strata 1	3%	97%	100%
Strata 2	1%	99%	100%
Strata 3	2%	98%	100%
Strata 4	0%	100%	100%
Strata 5	0%	100%	100%
<b>Total</b>	<b>2%</b>	<b>98%</b>	<b>100%</b>

Source: Final Evaluation of WYL project, April 2019

The involvement of local authorities throughout the process and the CVACC have led to better ownership of the project's achievements. Public restitution has significantly improved community confidence in project activities and created an environment of transparency and good governance in the community.

Conflict tensions have been declining in the various beneficiary communities. For example, with market gardening and small ruminant farming activities, women are becoming more and more busy, which means that they have less time to find each other and to make hawking between them, often a source of tension between them. Because generally all the concessions within the village benefited from the actions of the project. The fact that everyone can improve their income and have access to basic social services was a great achievement for the communities.

The involvement of women in the implementation of the project and participation in the decision-making process has helped to have more impact. According to the testimony of the communities: *"We can talk about the involvement of women, because women have benefited from all activities and in greater numbers than men. We understand that, if women are helped, the whole community is helped"*.

According to the community of Paridara (Commune of San), *"Market gardening has allowed us to meet our small food needs and access the market. Fattening has allowed us to increase our income. The breeding of small ruminants allowed us to be the owner of animals (increase of livestock). Credit savings enabled women to come together and support their respective IGAs. As for the cereal bank, it allows us to quickly find a solution for food during the lean season. The new CSA technologies have further facilitated our agricultural operations and increased our agricultural yields"*.

Through the various exchange visits, large-scale dissemination of CSA techniques and technologies to the surrounding village was possible. It has also created greater awareness of the different consequences of climate change. They were a catalyst also for the application of these new practices. The farm of the future approach addresses in the same direction to improve the capacities of anticipation and adaptation of the communities.

98% of the interviewees are in favor of the idea that if the project is to be reproduced it is done in the same way.

In general, 99% of beneficiaries confirmed that the project has contributed to strengthening the resilience of their community. And individually, 98% of the beneficiaries admit the improvement of their resilience.

Asked whether overall project activities you have he allowed to increase your income? 98% say they have contributed.

Unlike RIC4REC, which had an extensive approach with more communities (280 communities). WYL has adopted an intensive approach (30 communities) while increasing the activity pack within the communities. WYL has had more impact than RIC4REC and in the shorter term. This impact is associated with the involvement of local authorities, the community, the presence of a project officer for daily support during the implementation of the project. Participatory diagnoses have allowed communities to chart their path to resilience through their resilience plan.

In terms of lessons learned, it turns out that a market analysis is needed before purchasing small ruminants or other assets to be made available to communities to avoid a negative impact at the level of the market and non-beneficiary villages. In parallel, provide for the installation of a drinking trough for animals, which will help to reduce the rate of losses during the dry season.

Given the low level of beneficiary literacy rate, it will be necessary to include a literacy component in the implementation of the project. This activity will help community members make better use of management tools, document lessons learned and capitalize on achievements.

To improve the resilience of communities to the challenges of climate change, it will be necessary to give more time to implementation to appreciate the desired transformations. Behavioral change requires more time to observe whether communities are adopting mitigation measures for climate change shocks and stresses.

### **13. Limitations of data collection**

In general, the collection of information in the field took place in good conditions. However, the security context in the Mopti region led the Project Management with the instructions of the elected



municipal officials to remove the circles of Bankass and Koro from the scope of the study. Thus, only the communes of the Mopti circle (Fatoma and Sio communes) initially selected in the sample were surveyed. So, the initial objectives (337 beneficiaries) of the individual survey for the Mopti region were revised downwards to 74 beneficiaries.

## 14. Conclusion

Because of all these evidences, it turns out that the activities chosen by the communities themselves contribute more to improving their resilience in relation to their context. For this reason, the evaluation team recommends, through the voice of the communities, that if such a project is to be replicated all the above-mentioned activities must be considered. But the amounts for subsidies must be at least proportional to the size of the village to have more impact in the medium and long term. Considering the results and recommendations of RIC4REC contributed significantly to the implementation of the project and had a greater impact.

Overall, the WYL project's actions have contributed significantly to improving resilience at both the individual and community levels.

In conclusion, this realistic assessment has allowed us to better understand the why and how of our results, and more specifically, who is strengthened in their resilience to climate change. Through this analysis, we confirmed that the WYL result sets have had unexpected and expected positive effects on communities. A more sustainable approach over time will increase results and increase the sustainability of results for wider and longer-term impact.

## 15. Recommendations

WYL has taken an innovative approach in an inclusive manner, considering the lessons learned from RIC4REC in strengthening the resilience of communities vulnerable to the risks and stresses of climate change. The intervention was crowned by achieving good results in terms of improving resilience. With participatory implementation involving several stakeholders from grassroots community to local authorities, research institutes (ICRISAT and IER), NGOs (AMASSA AFRIQUE VERTE), private sector (Orange Mali, Contractors, etc..) and the DGCT.

WYL's action has contributed to improving the income of the most vulnerable communities by 98% of beneficiaries. At the same time, it contributed to the development of private sectors such as micro-enterprises set up at the level of the 30 intervention villages, the contractors' businesses used to provide services and the sandji / senekela services of Orange Mali.

Following all the evidences that resulted from the project, the evaluation team makes the following recommendations:

- Given the low level of community literacy, it will be better to include a literacy training component for future phases of the project;
- Change takes time and to improve the resilience of communities to have more impact on the 3As to achieve a likely transformation, at least 5 years is needed for similar projects;
- For a better ownership of the project by the grassroots communities, the strategy 01 of the project must be renewed with an allocation of funds of subsidy consequent on the size of the population of the communities;
- The integrated approach at strategy 03 level with microenterprise activities (cereal bank, market gardening, small ruminant husbandry and credit savings group) needs to be intensified and scaled up. It has helped to significantly increase community incomes and diversify their livelihoods;

- Training and awareness on CSA practices and technologies needs to be further promoted through the dissemination of Farm of the Future Videos. And the project must renew the activities of Strategy 02 to improve community access to climate information and new CSA technologies.