Final Report

Mid-term evaluation of the Prevention of seed Cotton Contamination Project in West Africa (Burkina Faso, Côte d'Ivoire and Mali) (CFC/ICAC/38)

Centre for Studies Training, Assistance and Advice (CEFAC) Ltd
Mamadou TOURE : Expert in cotton production, Head of Mission
Abdoulaye Traoré : Expert in Agricultural Extension
Idrissa Hallala Keita : Expert commercial cotton
Amadou Diané : Expert monitoring and evaluation, bilingual translator of documents

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# List of Abbreviations and Acronyms

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<tr>
<td>ACA</td>
<td>Association Cotonnière Africaine</td>
</tr>
<tr>
<td>ACE</td>
<td>Audit Conseil et Expertise</td>
</tr>
<tr>
<td>AFFICOT-CI</td>
<td>Association des Filières de la Filière Coton de Côte d'Ivoire</td>
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<tr>
<td>AProCA</td>
<td>Association des Producteurs de Coton Africains</td>
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<tr>
<td>APROCOT-CI</td>
<td>Association Professionnelle des Sociétés Cotonnière de Côte d'Ivoire</td>
</tr>
<tr>
<td>ARECA</td>
<td>Autorité de Régulation du Coton et de l'Anacarde</td>
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<tr>
<td>CCN NC</td>
<td>National Consultative Committee</td>
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<tr>
<td>CFC</td>
<td>Common Fund for Commodities</td>
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<tr>
<td>CIDT</td>
<td>Compagnie Ivoirienne pour le Développement des Textiles</td>
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<tr>
<td>CMDT</td>
<td>Compagnie Malienne de Développement des Textiles</td>
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<tr>
<td>COMATEX</td>
<td>Compagnie Malienne de Textiles</td>
</tr>
<tr>
<td>CTR</td>
<td>Centre Technique Régional</td>
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<tr>
<td>DOPA</td>
<td>Département des Opérations Agricoles</td>
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<tr>
<td>GPC</td>
<td>Groupement de Producteurs de Coton</td>
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<tr>
<td>ICAC</td>
<td>International Cotton Advisory Committee</td>
</tr>
<tr>
<td>IER</td>
<td>Institut d’Economie Rurale</td>
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<tr>
<td>IFDC</td>
<td>International Fertilization Development Center</td>
</tr>
<tr>
<td>INTERCOTON</td>
<td>Association Interprofessionnelle de la Filière Coton</td>
</tr>
<tr>
<td>ITC</td>
<td>International Trade Commission</td>
</tr>
<tr>
<td>LCCI</td>
<td>La Compagnie Cotonnière Ivoirienne</td>
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<tr>
<td>MRSC</td>
<td>Mission de Restructuration du Secteur Coton</td>
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<tr>
<td>NAC</td>
<td>National Advisory Committee</td>
</tr>
<tr>
<td>NPK</td>
<td>Nitrogen Phosphorus and Potassium</td>
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<tr>
<td>OCC</td>
<td>Office de Classement du Coton</td>
</tr>
<tr>
<td>OHVN</td>
<td>Office de la Haute Vallée du Niger</td>
</tr>
<tr>
<td>OPA</td>
<td>Organisation Professionnelle Agricole</td>
</tr>
<tr>
<td>PEA</td>
<td>Project Executive Agency</td>
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<tr>
<td>PPCC</td>
<td>Projet de Prévention de la Contamination du Coton Graine</td>
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<tr>
<td>PVC</td>
<td>Polyclore Vinile</td>
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<tr>
<td>SCPC</td>
<td>Société Coopérative des Producteurs de Coton</td>
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<tr>
<td>SICOASA</td>
<td>Société Industrielle Cotonnière des Savanes.</td>
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<tr>
<td>SOCOMA</td>
<td>Société Cotonnière du Gourma</td>
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<tr>
<td>SOFITEX</td>
<td>Société des Fibres Textiles</td>
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<tr>
<td>UE</td>
<td>European Union</td>
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<tr>
<td>URECOS-CI</td>
<td>Union Régionale des entreprises coopératives de la zone des Savanes de Côte d'Ivoire</td>
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<tr>
<td>UV</td>
<td>Ultra violet</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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<tr>
<td>WACIP</td>
<td>West Africa Cotton Improvement Program</td>
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<tr>
<td>ZPA</td>
<td>Zone de Production Agricole</td>
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Acknowledgements

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Field visits and interviews were conducted at M'Bengué, Korhogo, and Abidjan for Ivory Coast; Bobo Dioulasso, Banfora and Orodara for Burkina Faso; and Sikasso Segou and Bamako for Mali. Consultants met with the IFDC staff, the Governor of the Common Fund for Commodities (CFC) and national coordinator based in Ouagadougou, men and women cotton producers, Managing Directors or General Directors and staff of cotton companies and several project partners.

The team wishes to thank all interviewees who provided information and advices for the proper implementation of the study. It particularly wishes to express its appreciation for efforts and contributions made by Mrs., Mr. Sieste van der WERFF (CFC) SOME/Traoré Salimata (CFC), Willem A. M. Van CAMPEN (IFDC), Gakou Amadou (IFDC) Amadou OUADIDJE (IFDC) DIOMANDE Segde (IFDC) Honoré MOYENGA (IFDC), Vamissa DIOMANDE (Ivoire Cotton), Jean Paul G. SAWADOGO (SOFITEX), Salif Abdoulaye CISSOKO (CMDT), N’Fagnanama KONE (MRSC), Karim TRAORÉ (UNPCB) Soloba Mady KEITA (UN-SCPC) COULIBALY Moussa (AFFICOT-CI).

Opinions expressed therein are those of the authors, who are solely responsible for any errors or omission.
I. Executive Summary

1. Project Title: Prevention of Seed Cotton Contamination Project in West Africa (CCPP)
2. Reference: CFC/ICAC/38
3. Project Executing Agency (PEA): IFDC
4. Location: Burkina Faso, Côte d'Ivoire and Mali
5. Starting date: Mars 2010
6. Date of completion: Mars 2013
7. Founding:
   - Total cost of the project: US$ 7,000,000
   - EU founding: US$ 3,500,000
   - CFC founding: US$ 2,000,000
   - National counterpart: US$ 1,500,000
   - World Bank Co-founding: US$ 600,000

Relevance of objectives, used means and poverty alleviation

For the 3 cotton companies (SOFITEX, Ivoire Cotton and CMDT-Sud), the project the objectives are in a straight line with their companies’ guidelines in terms of improving the cotton quality, fight against contamination and improvement of producers’ income. Information, awareness creation, training and kits distribution activities were achieved by extension workers of cotton companies.

For unions of producer organizations, the project objective is noble and the CCPP was welcomed by producers who benefitted from awareness creation, training and equipment. Producer organizations are aware of the strong deterioration in quality suffered by African cotton in recent years. According to them, the implementation of this project will polish its image.

The points of view of cotton companies, producer organizations are shared by the ACA and the AProCA which have in common the improvement of the quality, the image of African cotton and the gross income of producers. This justifies their strong involvement in the Prevention seed Cotton Contamination Project in Africa.

Through the improvement of the gross income of producers, due to the production and sale of better quality cotton free of contamination, to the payment of this cotton at a higher price and the payment of premiums related to the sale of non contaminated cotton, the project fits into the logic of poverty reduction.

All the means used in the prevention of cotton contamination are available in the project area, adapted to the fight against contamination, without negative effects on the environment because they are all non polluting and recyclable and are relevant to fight the contamination.

Effectiveness and efficiency of the project implementation

Experiences of the cotton companies in the implementation of information, awareness creation, training and kits distribution activities; and the IFDC in the management of development projects, its good relations with cotton companies, producer organizations, agricultural research, ministerial departments in charge of agriculture and agricultural inputs suppliers in its intervention areas have helped overcome several difficulties in order to achieve set objectives.

The project availing of 5 senior staff (3 National Coordinators, 1 Monitoring & Evaluation officer and 1 accountant) used full-time (100%) and a regional coordinator at 50% of his time by the IFDC has been a favoring element to the achievement of results through facilitation, awareness creation, creation of linkages between various actors, the immediate search for solution to raised problems. Activities of these senior staff within the IFDC have accordingly, not at all hindered the project.

Members of National Consultative Committees (NCC) were selected based on their link with the cotton subsector in the context of production, ginning, marketing, agricultural research, textile research, quality control, pest control, the legislation or regulations. In each country, the NCC members were the transmission belt between the project and public services one hand and the other cotton companies and producer organizations that are outside the project area on the other hand.
The establishment of the NCC has enabled the institution of a climate of trust among stakeholders around a common goal: improving the quality and the image of the African cotton. It was one of the most effective elements in the awareness creation and the mobilization of actors around the contamination problems.

Annual work programs developed by the project comply with the framework defined in the manual for the preparation and management of projects to be funded by the common fund for commodities (appendix IV). They are also consistent with the project logframe.

The project logframe is well designed as a whole. It presents annually the intervention logic, objectively verifiable indicators and planned targets, means of verification and assumptions.

In 2011, on the 45 indicators to inform, 40 could be and 5 could not be i.e. a rate of 89%, which is satisfactory. Most activities (75%) were performed to more than 100%.

Several factors contributed to the implementation of the project including:

- uniqueness of the decision centre,
- experience and proximity of cotton companies,
- good involvement of national and regional partners, particularly producers,
- availability of funds for activities implementation,
- motivation of producers through the free provision of kits and the payment of perdiems for training.

The factors that have been unfavorable to the project implementation include mainly the complexity of the name of the product and the non-mastery of the market for the sale of non-contaminated cotton.

Also, the presentation to the customer of a product that is not contaminated without proof and the warranty on the non contamination has been an obstacle to the sale.

Nobody can take the risk to present a certificate of non-contamination, because it is difficult to find cotton completely free of contamination. But buyer does not trust the statements without a guarantee on the non contamination of cotton. The problem lies in the inability to ensure the absence of polypropylene and the risk of claims.

The non contaminated term was considered too strong by some cotton companies who have opposed non-contaminated cotton to the rest of the cotton supposed to be contaminated.

The major problems the project has been facing and for which adjustments have been made are:

- Ivorian crisis,
- the poor quality and lack of harvest bags, purchase tarps and storage tarps,

It should be noted that the Malian crisis, triggered following the coup d’état of March 22nd, 2012 did not impact the implementation of the CCPP project, the project area located to the South of the country while the northern part was occupied by the Islamists.

**Availability of co-financing and counterpart contributions**

The World Bank funded the edition and publication of 10,000 copies of the quality Charter, and 3,000 copies of the manual of procedures. These documents are being distributed to the inter-professional, producer associations, cotton companies (ginners), inputs suppliers, transporters, freight forwarders and shipping companies, international traders, ministries and concerned institutions (agriculture, industry, trade, research and development, etc.), technical and financial partners, NGOs and donors in eight countries in Western and Central Africa (Benin, Burkina Faso, Cameroon, Chad, Côte d’Ivoire, Mali, Senegal, Togo).

The involvement of the ACA and the AProCA in the project implementation allowed to give more visibility and dynamism to the fight against the contamination at the regional level, through the development and signature of the quality Charter and manual of quality control procedures against contamination.

The funding by the World Bank of a program to change national and regional legislation, to consider the contamination, has been beneficial, but its effects on the field will be visible only through an application and a rigorous follow-up by national and regional organizations.
The International Trade Centre (WTO-UNCTAD-ITC) contributed to create awareness of producers and ginneries on the negative impact of the contamination on the cotton reputation and price in West and Central Africa. Furthermore, cotton companies took an important part in the project funding, through the provision of vehicles for transport and bearing of a portion of salaries of staff involved in the project. Themes extended by project were already part of their extension themes, which also facilitated the training of agents on these themes.

**Compliance to Budget**

The total amount of the adjusted budget for the 3 years of project is US$ 4,991,000 (US$ 1,520,366 for year 1, US$ 2,683,219 year 2 and US$ 1,597,800 year 3). Achievements in late October 2012 amounted to US$ 3,393,200.39 achieved against a target of US$ 4,203,385. The share of general expenses (US$ 325,227.45) represents 8% of direct costs and 7.41% of total costs, which is within standards (8% of direct costs)

The highest expense line has been the one of materials and supplies with US$ 1,718,680.90 i.e. 39.14% of the total on which US$ 1,716,319.29 (99.86%) was allocated to the purchase of the 30,000 kits for producers thus an average of US$ 57.21 per kit, far below (-10.60%) the US$ 64 planned in the project proposal.

**Project results with regard to objectives and targets**

Outreach efforts have helped the project to involve 30,000 producers of which 11,500 for Burkina Faso, 11,500 for Mali and 7,000 for Côte d'Ivoire out of an initial estimate of 27,000 (i.e. 111%), members of 1,821 cooperatives or producer groups, as well as 168 supervisors (against a target of 173 i.e. 97%) in cotton production Regions of Banfora and N'Dorola in Burkina-Faso, M'Bengué in Côte d'Ivoire and Sikasso in Mali. Despite the Ivorian crisis which disrupted the project activities from November 2010, objectives were reached due to the increase of the number of producers in Burkina Faso and Mali who supervised in year 2, each 8,500 producers instead of 3,000 originally planned, Côte d'Ivoire could not achieve but 1,000 new producers.

The project thus trained in 3 years, 30,000 producers, 168 extension agents, 240 transporters and 1,269 ginnery staff.

With regards to the training of 30,000 producers, the total cost realized has been US$ 343,759.01 making US$ 11.46 per producer and US$ 5.21 per producer and per training session, for 36,000 producers (9,000 in year 2 and 27,000 in year 3) benefited from a recycling (upgrade).

Regarding the training of transporters and ginnery staff, the total cost realized has been US$ 8,334.68 for 1,509 persons (240 transporters and 1,269 industrial agents) thus an average of US$ 5.52 per person and US$ 4.88 per person per session taking into account the recycling of 200 transporters (120 in year 2 and 80 in year 3).

The project achieved in the first and second year, a accumulated seed cotton production of 143,223 tons upon a target of 100,000 tons for the end of the project (143%) and a cotton lint production of 59,502 tons. The 3rd year production forecasts are 126,990 tons of seed cotton and 54 332 tons of cotton fiber.

A significant improvement of the quality of the cotton lint is perceptible through the rate of high class in the project area compared to non-project areas. This rate has improved in 2011/12 project area and non-project compared with 2010/11 in Burkina Faso (91% against 77% in project area) and in Mali (92% against 88% in project area), but has deteriorated a little in Côte d'Ivoire (61% against 71% in project area). However, despite this degradation, it is the project area that produced 75% of the high class of Ivoire cotton since 3 campaigns.

The control of the level of contamination gave diverse results in the first year, but satisfactory in the second year with an overall rate of contamination lower in the project area than that of non-project areas for seed cotton as well for the fiber. Indeed, the level of contamination of the seed cotton in Côte d'Ivoire project area in 2011/12 was far below that of the 2010/11 campaign (13.20 kg/ton against 22.96 kg/ton i.e. - 42%) and also below the one of the non-project areas (14.87 kg/ton).

In Mali, this level in the project area was 6.22 kg/ton against 6.64 kg/tons in 2010/11 or a decrease of -6% and 9.99 kg/ton in non-project area (-37%). The analysis of samples of Burkina Faso was made in the second year because of problems related to the export of the genetically modified cotton.

Through these results, it appears a significant decrease of the level of cotton contamination in 2011/12, decrease resulting from the efforts made by the project for the prevention of contamination. However, the fight is not yet
won, because the 4 types of contaminants, particularly packaging contaminants mainly polypropylene, still exist in samples of seed cotton and cotton fiber in project and non-project area.

Packaging contaminants (plastic, hair pieces, papers, tissues) and the polypropylene which are all threats for spinners, particularly when they appear under fiber contamination form, exist in seed cotton samples as well as lint cotton in the two countries (Mali and Côte d’Ivoire) even if quantities were few. However, let’s notice that in seed cotton of the project area the frequency of samples with polypropylene in both countries is lower than those of non project area, and the frequency of samples with polypropylene and packaging contaminants is twice lower in Mali than Côte d’Ivoire. It should be noted that the project activities were disrupted in Côte d’Ivoire in 2011 following the crisis it has experienced.

In all, for this second year of the study, a noticeable decrease of the level of cotton contamination in all project and non project areas was observed. This can be due to the positive impact, of the Prevention of seed Cotton Contamination Project, on the cotton contamination level, though important efforts still need to be deployed to allow African cotton to get a better image. To do so there is need for all cotton producers, of countries concerned by the project, strictly apply all recommendations related to contamination prevention measures. It is a long way work that requires a permanent follow up and perseverance.

Cotton companies have faced difficulties for the sale of non-contaminated cotton fiber. Only 200 tons could be sold by the CMDT in 2011/12, with a premium 26 CFAF/kg. The non-sale of the fiber did not allow the premium sharing between the producers and cotton companies.

One of the constraints faced by cotton companies has been the delivery of non contamination certificates to traders, a document required by buyers but which could not be provided at a risk of heavy penalty in case of discovery of a single contaminant in the sold set, and it is difficult to find cotton totally free of contaminant.

Efforts need to be made in terms of fiber marketing and producers motivation in view of a generalization of the prevention of seed cotton contamination to the entire cotton producers of concerned countries.

Durability (sustainability) of the action pursuit at the end of the grant

The calculation of the premium of the non-contaminated cotton was made from premium of 26 FCFA/kg of fiber produced by the CMDT. Producers’ share in this premium would be 5.20 CFAF/kg of seed cotton on a fair share basis (50% each) of premium between producers and the cotton company. Calculations will be made on the basis of 5 CFAF/kg. The premium of the non-contaminated cotton would be CFAF 634,950 million in 2012/13 on the basis of 5 CFAF/kg. It must be taken into account in the mechanisms of seed cotton pricing in different countries. In the same manner, actors of pricing mechanism in each country could include in the common expenses line of the subsector, additional expenses related to production, ginning and marketing of non contaminated cotton. These expenses may concern specific supervision charges; producers, transporters, extensions agents, ginnery staff training charges; cotton samples analyses charges; etc...

The payment of the premium, allow producers to fund themselves the cost of equipment to combat the contamination. The annual cost of kits (FCFA 319 million) can be borne by the annual premium (CFAF 634,950 million) with a net margin of CFAF 315,950 million (US$ 631,900). The margin per producer would be CFAF 10.532 (US$ 21).

Cotton companies will benefit (2012/13) the same amount as producers (CFAF 634,950 million) on the fair sharing basis of the premium which level was 10.40 CFAF/kg of seed cotton.

The fight against contamination also passes by the replacement of current PP fertilizer bags by the PE. The packaging industry, FILTISAC based in Abidjan which supplies bags to most of the fertilizer industries in the sub-region, thinks that this replacement is technically possible even if it didn’t tried it. It is however left to analyze the impact of the cost on fertilizer prices.

Furthermore, the re-purchase of old fertilizer bags from producers in order to avoid their reuse can also be surveyed but this requires a good organization and the research for funding to better achieve the operation.
The generalization of the project at national level and the involvement of all cotton companies of the three countries are vividly expected by all actors. A national should be organized in each country to fix the generalization and sustainability frame of project activities. The generalization of the action at all cotton companies is perfectly possible, but requires a full commitment of all actors. Achieved results being still fragile, it is required to consolidate them by the pursuit and the intensification of research for potential clients to sale the non contaminated cotton. The generalization is an expressed expectation of beneficiaries (producers, cotton companies), but also a necessity for the success recorded by single cotton company or a single cotton production region cannot guaranty the success of the action. The strong involvement of National Consultative Committees, the ACA and the AProCA and the determination of cotton companies and producers organizations to continue the fight against the seed cotton contamination is strong signal the sustainability of project activities.

**Recommendations**

The following recommendations are made to correct deficiencies in the project implementation and the application of measures taken by the ACA and AProCA in the fight against contamination and allow African cotton sustainability of project activities and their generalization to all companies and all cotton producers in the three countries concerned.

Regarding the project implementation, identified short comes are related to:
- Lack of harmonization of data between accounting monitoring documents, as well as budget outlines and per diems paid to beneficiaries of various countries,
- The update of log frame in relation with project impact monitoring documents
- Non-compliance sampling standards by cotton companies,
- Low level of contamination control
- Nonpayment of premium to producers and cotton companies.

About the sustainability of project activities, there is a need to take measures for the implementation of recommendations from the ACA and AProCA and the organization of a national reflection day in each country in order to establish the institutional framework and the generalization and sustainability of project activities.

The following recommendations are formulated by actors in order to correct deficiencies and propose guidelines for the sustainability of project activities.

**Project Implementation**

**IFDC**
- Harmonize data between accounting monitoring documents, as well as budget outlines and per diems paid to the beneficiaries of various countries.
- Update the logframe in relation with project impact monitoring documents

**CERFITEX**
- Check the contamination rates at another level (Lab, spinning) on 10% of cotton fiber samples from CERFITEX
- Deliver to cotton companies, a certificate of contamination control that they could present to traders to certify the actual level of contamination of the cotton produced in the project area.

**Cotton companies**
- Equip ginneries with simple scales in view of compliance to sampling standards
- Continue the research of potential clients for the sale of non contaminated cotton fiber.

**Generalization and sustainability of project activities**

**Government**
- Change legislation to take into account the contamination in the quality control and cotton pricing,
- Include, in the cotton pricing mechanisms, the premium payments from non contaminated cotton sale

- Organizing a national day of reflection in each country in order to establish the institutional framework of the generalization and sustainability of project activities.

**Cotton companies and producer organizations**

- The implementation of the action plan against contamination and costs and benefits sharing,
- The inclusion of clean cotton kits in the standard package and their costs sharing (50/50), the sharing of eventual premiums/ gains received from non contaminated cotton sale
- The inclusion of the contamination in the quality control system of seed cotton and fiber,
- The application of quality charter on good practices in the fight against contamination, and manual of procedures outlining best practices to avoid contamination at each stage of the cotton value chain
- Control of the contamination in the fiber samples in grading centers in each country
- Implementation of training programs for actors of the cotton value chain (producers, extension agents, purchase agents, ginners) based on the contents of the manual of procedures,
- Appeal ACA and AProCA for a support in order to consolidate achievements and prepare new areas,
- Create a network made of producers, cotton companies, traders and spinners; in order to further reassure traders and spinners who will be able to see in the field efforts in the fight against contamination; as the marketing support has been lacking in the marketing for the non-contaminated cotton label

The implementation of the above recommendations will allow the cotton companies to meet sampling standards set by CERFITEX to obtain more reliable contamination rates and results to that worth efforts provided by producers and cotton companies.

The control, of part (10%) of cotton fiber samples from CERFITEX; by another structure (Laboratory, Spinning) aims to confirm or refute CERFITEX results and give them more credibility.

Premium payments to producers and cotton companies being one of the project goals to sustain the contamination prevention activities; the success of cotton companies in the sale of non contaminated cotton fiber remains a priority.

The implementation of the action plan, and the application of quality charter and manual of procedures as developed and adopted by ACA and AProCA to allow changes in legislation at national and regional levels, to consider the contamination in the quality control and costs and benefits associated with them in national cotton pricing mechanisms; will undoubtedly allow to lay foundations for sustainability and mainstreaming of project activities.

Also a support (technical, financial) from ACA/AProCA is still needed to help producers and cotton companies in the implementation of the ACA/AProCA action plan and allow rapid generalization of project activities.
II. Introduction

2.1. Time and place of the evaluation

The evaluation was conducted from November 15\textsuperscript{th}, 2012 to January 15\textsuperscript{th}, 2013. It was conducted in the project intervention areas in the 3 countries: Burkina Faso (Banfora, Orodara, and Bobo Dioulasso), Côte d’Ivoire (Niellé, Koni, M’Bengué, Korhogo, Abidjan) and Mali (Sikasso, Kignan, Kléla, Kadio, Segou and Bamako).

2.2. Composition of the evaluation team

The evaluation team of the "Centre for Studies Training, Assistance and Advice (CEFAC)" Ltd comprises:

- Mamadou TOURE: Expert in cotton production, Head of Mission
- Abdoulaye Traoré: Expert in Agricultural Extension
- Idrissa Hamalla Keita: Expert commercial cotton
- Amadou Diané: Expert monitoring and evaluation, bilingual translator of documents.

For the implementation of the evaluation, the consultant’s team, before the field work, presented first to IFDC (Project Executing Agency), the mission launching note during a meeting organized in Bamako on November 23\textsuperscript{rd}, 2012. IFDC, during the same meeting, made a presentation on objectives and results achieved by the projects since it implantation. The methodology, data collection tools and intervention timeline presented by the consultant have been validated by the IFDC.

The evaluation mission achieved in the field, from November 28\textsuperscript{th} to December 21\textsuperscript{st}, 2012; 31 meetings with beneficiaries project partners of which 13 from Mali, 10 in Côte d’Ivoire and 8 in Burkina Faso. It visited 3 cotton ginneries (Sikasso 2 in Mali, M’Bengué in Côte d’Ivoire and Banfora 2 in Burkina Faso) and COMATEX and CERFITEX factories in Mali. It met in all 509 persons of which 176 in Burkina Faso, 165 in Côte d’Ivoire and 168 in Mali. Men producers (68.90%), women producers (6.50%), members of cotton producer groups and cooperatives and their unions (13.15%) were the most numerous with 78.55% of the total. Cotton company staff occupies 16% and other project partners 6% of the total of met persons. Confer to appendix report of the evaluation for details on methodology, field visits program, list of met persons, list of consulted documents and the terms of references of the mission.

III. Description of project main components

3.1. Analysis of the context

The African cotton is a cotton that has features well appreciated by traders and spinners due to the intrinsic quality of its lint (good suggested fewer short lint, less neaps) and its cleanliness due to a manual harvest having as a result fewer vegetable impurities.

This cotton, despite its interesting features, is sold on the world market with some discounts often large (5 to 20%) compared to competing cotton mechanically harvested because of fears about contamination by foreign bodies.

Yet, the mechanically harvested cotton has a shorter fiber due to the thorough cleaning, contains more neaps and more plant residues. Manually harvested cotton being clean cotton, should normally be bought at a high price than the mechanically harvested one.

However, the manually harvested seed cotton is often contaminated during harvest, storage, handling during weighing and transport operations. The presence of foreign bodies in the fiber reduces the theoretical advantage conferred by manual harvesting. Contamination of raw cotton by foreign bodies is now spinners’ major concern some of which prefer cotton harvested in the machine that harvested manually in order to avoid potential risks of claim.

Within July 1, 2006 and February 29, 2008, CFC and ICAC had conducted a CFC/ICAC 32 FT joint study on “Production and marketing uncontaminated cotton in Mali”. This study allowed identifies the problem nature, causes and providing other relevant information. Following the identification of issues indicated in the study, IFDC, in 2009, hired a team of specialists to conduct a study on the cotton quality, whose mission was to make a
literature review, and meet with stakeholders from three countries Burkina Faso, Côte d'Ivoire and Mali on how they perceive the problem and the best ways to address them through the CFC proposed project.

This study report summarizes recommendations provided by the main stakeholders in the three countries on the project priorities, approach, implementing partners and specific activities to reduce the cotton contamination by means of incentives and income generation for farmers.

Based on the 2009 study results, the "Common Fund for Commodities" (CFC) and the European Union (EU) have decided to jointly fund the cotton seed contamination Prevention project in West Africa (Burkina Faso, Côte d'Ivoire and Mali) CFC/ICAC/38 to contribute to the improvement of quality cotton production in the region by promoting efforts to reduce contamination during harvest, transport and ginning and enable better enhanced value of this production.

Aside this intervention, the World Bank initiated, on the hitch of cotton contamination, a program of actions designed in synergy with the project activities to strengthen the institutional aspects.

ICAC proposal was approved in November 2009 by CFC Executive Council, and in March 2010, CFC and ICAC concluded an agreement with IFDC on the project implementation.

**Project Executing Agency (PEA):** The project is therefore implemented by the International Fertilizer Development Center (IFDC)

**Supervisory Body (SB):** "International Cotton Advisory Committee (ICAC) is responsible for the project supervision.

**Project Duration:** The project, with three years duration, was launched in March 2010 and will end in March 2013.

**Project Location:** It intervene at a pilot scale in cotton areas of Banfora, Bobo Dioulasso, Orodara and South Kénédougou in Burkina Faso, M'Bengué (Korhogo) in Côte d'Ivoire and Sikasso in Mali. This border area is called “triangle of the Kénédougou” due to the coexistence of Senufo and Dioula ethnnical groups mainly at the borders of the three countries.

3.2. **Major problems handled by the project.**

Studies on cotton contamination in South Saharan Africa particularly in the 3 countries (Burkina, Ivory Coast, Mali) have highlighted the following problems:

- Lack of training for producers and cotton companies’ technical and industrial staff and carriers on the prevention of seed cotton contamination.
- Lack of producers’ appropriate equipment for harvesting, handling, transport and storage to avoid seed cotton contamination;
- Poor harvest, transportation and storage conditions of seed cotton,
- Non consideration of polypropylene contamination in the grading of the fiber and seed cotton in cotton companies,
- Lack of data on seed cotton and fiber contamination level,
- Non-recognition and non enhanced value of uncontaminated cotton by buyers without a certificate
- Lack of motivation of producers and ginners for the adoption of measures to control cotton contamination,
- Ignorance of efforts to control contamination at national, regional and international level

3.3. **Project Objectives.**

**General Objective**

The project overall objective is to improve cotton producers’ income by changing their management practices to reduce cotton lint contamination.

**Specific Objectives**

The overall objective is declined into 3 specific objectives:

- Identify, sensitize and train in 3 years, 9,000 producers by country as well as concerned extension service staff, transporters and ginning factories agents;
- Develop a program that encourages voluntary adoption of contamination reduction techniques by 27,000 participating producers including appropriate measures;
- Ensure that less contaminated cotton is supported and marketed to take advantage of benefits associated with its status (premium on the international market).

3.4. **Means used to face problems**

The project is made of 3 main components and 11 activities and 25 sub activities. The project has developed several strategies and provides skills, considered as its products to achieve its objectives.

**Project awareness creation strategy** has been to identify areas, groups, producers and extension workers involved in the project and stakeholders’ awareness creation for non-contaminated cotton production. Awareness creation hit both producers and cotton companies agents involved in the project, but also partners, cotton companies and producers outside the project area. It also involved construction and installation of signboards, the development and diffusion of pamphlets on cotton contamination.

**Training skills** through the organization of training modules replay workshops, the training and retraining of extension agents who in turn train producers; organization of inter-farmers field visits at national and regional levels to enable fruitful exchanges between different actors.

**Producers’ performance monitoring skills** through training of the cotton companies agents on surveys implementation at producers and ginning factories levels. These surveys were designed to establish a reference situation on farm families and ginning factories and to supervise progress over the project life. Casual and the project impact monitoring surveys were also conducted.

**Strategy for producers’ equipment** in non contaminant kits for seed cotton harvesting, handling and storage was based on identification, in collaboration with producers, cotton companies and spinners, of the best equipment for harvesting at lowest production cost. It allowed to ensure good distribution and use of such equipment. Producers’ equipment in non contaminants kits is intended to prevent seed cotton contamination during harvesting, storage, transport and collection (primary marketing).

In addition to these equipment, producers have been trained in the manufacture of hurdles to avoid ground storage of the harvested seed cotton and sensitized to the restoration of seed cotton storage silos.

**Non-contaminated cotton transportation and ginning skills** through awareness creation and training of actors in the fiber production chain (transporters, ginning factories staff including samplers) on contamination prevention measures.

**Determination and contamination prevention skills** through the achievement by the CERFITEX of measures on seed cotton contamination and fiber in and outside the project areas, and the integration, through cotton companies, of contamination measures in grading activities, the promotion of non-contaminated cotton, the recognition of a label, the benefit of a premium in the sale and implementation of a survey among non-contaminated cotton buyers.

**Non-contaminated cotton promotion and dissemination skills** through the encouragement and dissemination of the project results in intervention countries and in the region, the defense of quality cotton producers interests and the collaboration with the cotton sector associations (unions) and regional economic communities (WAEMU, ACA, AProCA) to promote the need, methods and benefits of non-contaminated seed cotton, to acknowledge and abide by the commitments of the ACA/AProCA quality Charter.

In addition to these resources, the project considered the cross-cutting themes such as the environment and communication.

Regarding the environment, it emphasized on strengthening extension agents and producers capacities with regard to compliance to crop pathology treatments standards, storage and use of insecticides.

Regarding communication, the project carried out several actions to wider its activities dissemination: (i) banners for the extension agents, transporters and factories staff training; (ii) the production and distribution of audio cassettes, at proximity radio stations level, on the awareness of the project and cotton contaminants, (iii) inter farmer field visits and other exchanges.
3.5. Project cost

The total cost of the project is US$ 7,000,000 as follows:

- **CFC Grant**  
  US$ 2,000,000
- **European Union grant through its all ACP program (AAACP)**  
  US$ 3,500,000
- **Counterpart contributions of various parties**  
  US$ 1,500,000
- **World Bank complementary activities funding**  
  US$ 600,000

Out of CFC US$ 2,000,000, US 500,000 are financed by the contribution of the OPEC Fund for International Development assigned to CFC.

3.6. Project Beneficiaries

The project direct beneficiaries are cotton producers and cotton companies involved in the project implementation.

3.6.1. Cotton producers

Cotton producers are farmers that are grouped within an agricultural farm and practice cotton production as main source of income. Next to cotton, they grow cereal crops, legumes and other crops. Farms in the project area are of family-type composed of one or several households. According to the survey conducted by the project in 2010 on the reference situation of agricultural farms, it appears that their sizes vary in their size from 7.91 actives in SOFITEX area, 13.53 actives in Mali-Sud areas with 9.23 actives for Ivoire Coton. The percentage of women is the most important; it ranged from 51% for Ivoire Coton to 54.47% for Mali-Sud. Households vary from 2.65 for SOFITEX area to 3.15 in Southern Mali-area and the number of actives per household ranges from 2.98 at SOFITEX to 4.30 in Mali-Sud. For details see table 1 in appendices.

According to the typology used in Mali-Sud, agricultural farms were classified into five (5) categories: A, B, C, D and motorized. Agricultural farms’ rate of equipment (type A + B) is satisfactory in General (81.2%). It ranges from 68% for the SOFITEX area to 88% for the CMDT Southern branch with 85.7% for Ivoire Coton. The lack of equipment concerns 18% of the agricultural farms in the project area. For details see table 2 in appendices.

The useful agricultural area of the project area is 18.29 ha on average of which 5.35 ha are devoted to cotton making 29%. It varies from 14.63 ha for Southern CMDT to 22.15 ha for Ivoire Coton. Average yields of the seed cotton are very close in the 3 cotton companies and revolve around a ton per hectare (1,072 kg/ha or 450 kg lint/ha for Ivoire Coton; 1,117 kg/ha or 469 kg lint/ha for CMDT-South and 1,175 kg/ha or 493 kg lint/ha for SOFITEX).

Average agricultural farm gross incomes from cotton in 2009/2010 have ranged from US 553.13 (FCFA 276,565) for CMDT-South to US 1528.43 (FCFA 764,216) for Ivoire Coton with US 1115.86 (FCFA 557,932) for SOFITEX. The cotton purchase price being substantially the same for the indicated period, namely 175 CFA F/kg for Ivoire Coton, 170 CFA F/kg for CMDT-South and 168 CFA F/kg for SOFITEX, the gap between the incomes is due to the size of the average area per agricultural farm which is higher in Ivoire Coton (7.38 ha) than in CMDT-South (3.38 ha) with 5.29 ha for SOFITEX. Ivoire Coton owns the higher equipment rate in tractors with 3.8% vs. 2.6% for SOFITEX and 0% for CMDT-South.

Per hectare gross incomes are higher in SOFITEX area also due to a higher yield with US 210.94 (CFA 105,469) and lowest in CMDT-South with US 163.65 (CFAF 81,823) and US 207.10 (CFAF 103,552) for Ivoire Coton.

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1 A household is made of one man and one woman married with/no child. In a polygamous home each wife and her children make a household.

2 Actives are persons (men and women) aged from 10 years and above who work permanently in the farm.

3 A is an equipped farm having at least two full units of animal traction, one seeder, one donkey/bullock cart and one cattle herd of at least 10 heads including bullock
   - B is an equipped farm having at least one unit of animal traction
   - C is a partially equipped having one incomplete set unit of animal traction and having experience in animal traction
   - D is a non equipped farm using man power for cropping
   - Motorized is a farm having a operational tractor
The number of target producers in the project was 27,000 at a rate of 3,000 per year and per country. So after 3 years of the project, 9,000 producers should be involved in the project in each country. In all, 30,000 Producers were involved in the project against an estimate of 27,000 thus 111% after 3 years.

3.6.2. Cotton Companies

For the project implementation, three cotton companies were selected: SOFITEX in Burkina Faso, Ivoire Coton in Côte d'Ivoire and CMDT southern branch in Mali. The three companies have a lot in common namely their vertical structure from the bottom to the Summit, the existence of structures in charge of producers, ginning, and sale of cotton lint mentoring among other. They work in perfect harmony with the union of farmer organizations, also structured from bottom to top.

3.6.2.1. SOFITEX in Burkina Faso

Following the cotton sector reform reached in 2004, the SOFITEX was split into 3 cotton companies: SOCOMA, FASO COTON and SOFITEX, all playing a vital role in the socio-economic development of the country. The National Union of Burkina cotton producer (UNPCB) is the national union which gathers the 8,841 village level cotton producers groups (GPC). The national producers’ organization has a share in the capital of the 3 cotton companies: 30% in SOFITEX, 20% in FASO COTON and 10% in SOCOMA.

The SOFITEX is by far the largest company with 80% of cotton production, followed by FASO COTON (15%) and SOCOMA (5%).

Of the 8,841 cotton producers groups (GPC) 6,644 or 75% are in the SOFITEX area as well as 67.75% (147,604) of agricultural farms.

SOFITEX cotton production increased from 284,070 tons of seed cotton in 2010/11 to a projection of 500,000 tons in 2012/13 an increase of 215,930 tons and a provisional projection rate of 76%. For details see table 3 in appendixes. Remember that the peak Burkina Faso production was 714,000 tons.

Despite the country achieved progress in many areas at regional and international level, SOFITEX is facing many problems in particular decline of yields in the field with as result a decline of cotton producers’ incomes.

To reverse this trend, it has developed a strategy to improve the cotton yields and the quality through well targeted messages and it involvement in the implementation of specific projects or programs such as West Africa Cotton Improvement Program (WACIP), and the Cotton Contamination Prevention Project in Africa (CCPP).

3.6.2.2. Ivoire Coton in Côte d’Ivoire

The Ivorian cotton sector was until 1998 managed by the Ivorian company for the development of textile (CIDT), which had a monopoly of the seed cotton purchase, lint and seed marketing. Reforms, implemented in 1998, have been essentially to privatize a part of CIDT factories, sold to two private operators (Ivoire Cotton and LCCI) and the abolition of the monopoly of CIDT, each of the two private cotton companies being free, at the end of a transitional period of two years, to buy the seed cotton with producers that it would have previously provided inputs (on credit) and technical supervision. The rest of CIDT factories new or residual were called to be privatized later.

The socio-political crisis experienced by the country has in 2002 led to the break-up of the main producers organization: Regional Union of Cooperative Enterprises in the savanna area of Côte d'Ivoire (URECOS-CI) to give birth to a multitude of unions, to the collapse of the cooperative system and the emergence of middlemen who paid the cotton cash but at a price much less than the official price following the financial difficulties of the cotton company of Côte d'Ivoire (LCCI) of the residual Ivorian Company for Textile Development (CIDT).

Because of these events, production has declined sharply, from 402,367 tons with a yield of 1,381 kg/ha in 1999/2000 (peak of production) to 120,000 tons with a yield of 702 kg/ha in 2007/2008.

Today, the subsector has 6 companies including 1 public (CIDT) and 5 private and 13 ginning factories.

CIDT, COIC, IVOIRE COTON, SICOSA, DOPA, SECO.

Producers are organized around 26 regional Unions of professional agricultural organizations (OPA) or umbrella which has 380 basic OPA of which 367 are legally constituted. AFFICOT-CI (Association of Côte d'Ivoire cotton subsector unions) has 17 out of the 26 Unions (65%)
The subsector is managed by 5 control structures:
- INTERCOTON (Cotton Subsector Inter-professional Association)
- ARECA (Coton and Cashew Regulation Authority)
- AFFICOT-CI (Association of Côte d'Ivoire Coton subsector unions)
- APROCOT-CI (Professional Association of Côte d'Ivoire cotton companies)
- ACE - Audit Control and Expertise

The progress of domestic seed cotton and lint production was the following from 2010-2011 to 2012-2013:

- The national seed cotton production increased from 174,689 tons in 2010/11 to a projection of 340,000 tons in 2012/13, or an increase of 165,311 tons (95%). For details see table 4 in appendixes.

Ivoire Coton, integrated cotton company with a relatively homogeneous area (extended to M'Bengué area since the take-over of LCCI processing unit) and supplying inputs and producers mentoring of its area is one of the well-structured. The company is working increasingly with cooperatives and informal groups which it has often led to the creation. The part of Ivoire Coton in domestic production as projection of the campaign 2012/13 was 141,362 tons (41%).

Ivoire Coton ambition is to improve its yields, its cotton quality and its producers' incomes, which explains his involvement in the implementation of the seed cotton contamination prevention project (CCPP).

3.6.2.3. CMDT-South in Mali.

In Mali, the cotton production mentoring is provided by two structures: the Malian company for Textiles Development (CMDT) for 97% of the production and the Office of the Niger Upper Valley (OHVN) for about 3%. OHVN which is not a cotton company, intend to mentor seed cotton production that is subsequently purchased and ginned by CMDT.

Since February 2001, reforms aiming at privatizing CMDT have been initiated by the Government through the establishment of the cotton sector restructuring Mission (MRSC), attached to the Prime Ministry. The revised timeline of the cotton sector reform process adopted by the board of Ministers on December 28th, 2005 provided among other the establishment of three regulatory structures: the cotton Interprofession (IPC), the cotton classification Office (OCC) and the Company Cotton Exchange (SBC) which no longer has emerged.

Cotton Inter-profession (IPC) mission is to ensure the subsector management. It is indeed within it that are discussed all cross-cutting issues, that is, those affecting the seed cotton and inputs purchase price but more generally the pricing process, inputs supply procedure, seeds, research, tracks related issues.

The operational privatization scheme, which was adopted by the board of Ministers on October 04th, 2006, retained the option of the creation of 4 branches with the following shares distribution in each branch:

- Producers: 20 %
- State: 17 %
- Workers: 2 %
- Strategic Partner: 61 % by international tender.

The 4 branches have been created on December 15th, 2007 at the CMDT 52nd Board meeting in the form of limited companies with a capital of ten million FCFA or U$ 20,000 each owned 100% by CMDT. They are not yet privatized. CMDT-Southern branch leading the contamination prevention project activities is one of 4 branches.

The total number of cotton producer Cooperatives companies (SCPC) is 7,177 out of which 90% (6,438) are in the CMDT area as well as the 94% (166,718) of the number of farms. For details see table 5 in appendixes.

Despite this performance, CMDT is facing difficulties namely:
The decline of field cotton yields having as consequence the decline in producer incomes, performance decrease of some ginning industries, the non-compliance with cotton harvest, ginning, storage, and transport standards and the lack of rigor in the seed cotton classification.

To overturn this trend CMDT involved itself in the implementation of the cotton contamination Prevention project (CCPP).

3.7. **Expected outputs**

Project expected outputs are:

- To establish pilot activities in 3 countries to demonstrate ways, means and benefits to prevent seed cotton contamination.
- To provide incentives to encourage producers to redouble efforts to keep tools and cotton clean.
- To help the cotton companies to reduce contamination throughout cotton processing and handling.
- To involve 27,000 producers in West Africa, producing over 100,000 tons of less contaminated seed cotton during the project 3 years.
- To sign contracts with at least a textile industry to participate in the project and buy less contaminated cotton with premium.
- To establish a system to generate a financial incentive to be shared with the producers.

3.8. **Major concerned stakeholders**

3.8.1. **Supervisory Body (SB)**

The International Cotton Advisory Committee (ICAC) is an International commodity body on cotton and textiles and serves as Supervisory Body (SB) for the Prevention of seed Cotton Contamination Project (CCPP). It is responsible for setting priorities, formulating and supervision the project. As such, it receives all reports developed by the administrator on the project implementation, as well as consultants’ evaluation reports.

3.8.2. **Project Executing Agency (PEA)**

The International Fertilizer Development Center (IFDC), an international centre for soil fertility and agricultural development is an international public organization, which mission is to help developing countries to sustainably enhance agricultural productivity. IFDC programs consider (i) farm inputs market, (ii) sustainable management of agricultural enterprises and agribusiness (iii) agricultural production market through the development of agricultural subsectors and market information systems. It is the Project Executing Agency (PEA). As such, it is responsible for the project implementation, the development of monthly, quarterly, semi-annual and annual monitoring reports, project mid-term and completion report. It reports to project donors (CFC, EU, and World Bank) and supervision body (ICAC).

**Experiences of the Project Implementing Agency (IFDC)**

IFDC has many experiences in development projects management. The IFDC Mali office is currently implementing six (6) development projects of which two (2) are on cotton (CCPP and WACIP).

With regard to cotton sector, the IFDC implemented from 2006 the Cotton Sector Strengthening Program in Western and Central Africa (WACIP) “West African Cotton Improvement Program” in Benin, Burkina Faso, Mali and Chad (country of sectorial initiative for cotton the C4). The WACIP continues currently its activities in Burkina Faso, where it works in synergy with the CCPP in the frame of training producers on techniques of prevention of seed cotton contamination.

3.8.3. **Collaborative institutions**

The project collaborating institutions are cotton companies, farmer organizations, research, textile industries and regional organizations (ACA, AProCA and UEMOA).

3.8.3.1. **Cotton Companies**

The three cotton company (SOFITEX, Ivory Cotton and CMDT-South SA) are presented in Chapter 3.6 related to recipients, because they are both project beneficiaries and contributors.

As beneficiaries, they take advantage of the project results in terms of premiums from the sale of non-contaminated cotton and improvement of image among traders and spinners.
As project contributors, they are responsible for the selection of sites, farmer organizations, producers and the field implementation of all contamination control measures.

3.8.3.2. Farmer Organizations

Producers are organized depending on countries either into Cotton Producers Group (CPG) in Burkina Faso, Informal Group (IG) or cooperative in Côte d’Ivoire and Cooperative Societies of Cotton Producers (CSCP) in Mali. These grassroots structures are grouped to form one or more unions at national level. The evaluation mission met with the following unions in the field: the National Union of Cotton Producers (UNPCB) in Burkina Faso comprising 8,841 CPG, the Association of Cotton sector unions of Côte d’Ivoire (AFFICOT-CI) which includes 17 unions and 380 cooperatives, the National Union of Cotton Producers Cooperatives Societies (UNSCPC) of Mali which includes 7,177 SCPC.

These unions participate fully in the project implementation through information and awareness creation producers.

3.8.3.3. Research

Cotton research structures: National Environment and Agricultural Research Institute (INERA in Burkina Faso) and the Institute of Rural Economy (IER) in Mali have been involved in the project from conception to implementation phase. In fact, the Institute of Rural Economy has been responsible for the implementation, in relation with CMDT, of the CFC/ICAC/32 FT project related to the production and marketing of uncontaminated cotton in Mali over the period of July 1st, 2006, to February 29th, 2008.

The IER, in relation with CERFITEC supports the sampling and controlling contamination rate in this project. Researchers are members of the experts Committee established in each of three the countries (Burkina, Ivory Coast and Mali) for the training of cotton companies’ agents.

The Research and Training Centre for Textile Industry (CERFITEC) is a Science and Technology based Public Institution (EPST) created by law N°04-003 of January 14th, 2004. CERFITEC mission is to ensure initial and in-service training, and contribute to the promotion of research in the field of textiles and appendixes at National, Sub regional and Regional levels. CERFITEC benefited, in the CFC/ICAC/33 project framework relative to the commercial normalization of the instrumental measure of cotton (CSITC), a funding for the equipment of the Regional Technical Center of Instrumental Classification of cotton (CTRCIC). This center was built in agreement with WAEMU standards and equipped with a CMI HVI 1000/700.

It has been committed, in the CCPP implementation frame work, to determine the level of seed cotton and lint contamination in the project area and compare it to the level of contamination of non-project area.

3.8.3.4. Textile Industries

The Malian Company for Textile (COMATEX SA) is a company with mixed economy whose capital is 20% owned by the Mali Government and 80% by the Chinese company COVEC. It is an integrated textile complex processing cotton lint into various produces that are: files, yarn, son looms, printed fabrics, greige fabric, the koba etc.

From 1994 to 2005, COMATEX achieved over 5.2 billion CFA francs of investments mainly meant for equipment technical renovation and the acquisition of new production equipment and related equipment.

After international tender, it was selected for the production of kits used in the seed cotton contamination control.

3.8.3.5. Regional Organizations

African Cotton Association (ACA) and African cotton producers Association (AProCA)

ACA and AProCA signed, in 2009, a partnership agreement in order to strengthen cooperation between African Cotton Companies, represented by ACA and African Cotton Producers Organizations represented by AProCA.

In 2012, they signed the Charter on African cotton quality whose goal is to sensitize the subsector different stakeholders on the concept of cotton lint contamination, its challenges, provisions and practices to eradicate it.

West African Economic and Monetary Union (WAEMU)

Regarding the cotton sector, West and Central Africa Ministers of agriculture met on 25th and 26th June 2002 in Abidjan to consider measures to improve the cotton sector competitiveness. One of the measures adopted was to
develop and implement a program of interest common to States on cotton through the New Partnership for Africa Development (NEPAD). From its own side, WAEMU has, based on results of a BOAD study funded, sets an agenda for the competitiveness of the textile cotton subsector in December 2003. WAEMU has then formulated among others the objective of processing 25 percent of cotton lint by 2010 to create 50,000 direct jobs in the textile and garment sector and to encourage the development of local expertise.

In 2006, the African Development Bank granted a 8 million loan to the Republic of Benin, 10 million UC to Burkina Faso and 10 millions UC to the Republic of Mali and a donation of 5 millions UC to the Republic of Chad and 2 millions UC to the WAEMU Commission for the financing of the textile cotton sector support project in the four countries of the sectorial initiative on cotton.

These actions prove to the requisite standard WAEMU interest and commitment to control seed cotton contamination to make African cotton sector, stronger and more competitive.

3.10. Relationship with other projects financed by the CFC

CFC/ICAC/38 project, relative to seed cotton contamination prevention in West Africa (Burkina Faso, Côte d'Ivoire and Mali) whose objective is to improve cotton producers income by changing their management practices to reduce cotton lint contamination, is one of the four projects funded by CFC/ICAC, to improve the competitiveness of African cotton sector and to improve the gross incomes of producers.

It completes works already carried out in the CFC/ICAC/32 FT project frame on the production and marketing of uncontaminated cotton in Mali (2006 to 2008), the aim was to establish the degree of contamination, the type of contaminants, as well as the way in which these contaminants are added to the cotton and the reasons for this phenomenon.

All ACP Program, an initiative of the European Union Commission and the ACP secretariat who participated in the financing of the CCPP and which has as objective the improvement of ACP commodity producers incomes and livelihood conditions collaborate with CFC in the cotton aspect of its program through the co-financing of 2 other projects focused on cotton development in Africa. It is about (CFC/ICAC/33 and CFC/ICAC 37) projects.

These two projects have in common with the CCPP, the establishment of structures that contribute to the sustainable development of cotton production by the increase of producers and other players in the value chain incomes. They are developed in close collaboration with the International Cotton Advisory Committee (ICAC).

IV. Analysis of project objectives

Importance African cotton contamination issue

4.1. Relevance of project objectives

For the 3 cotton companies (SOFITEX, Ivoire Coton and CMDT-South), the project objectives are in a straight line of the orientations of their companies in improving cotton quality, contamination control and improvement of producers incomes. Information, awareness creation, training and kits distribution activities were achieved by extension workers of cotton companies. They took part in the project financing through the provision of vehicles for the transport and the bearing of part of the salary of agents involved in the project. Project extended themes were already part of extension themes of cotton companies, which also facilitated agents training on these themes.

Regarding the used Kits, each of the three companies had some experience in the use of its equipment, either through previous projects (case of CIDT, parent company of Ivoire Coton with SUMITOMO in 1992/93) or through other ongoing projects with organic and fair trade cotton and the Better Cotton Initiative at CMDT. The SOFITEX currently provides its GPC with cotton made purchase tarps. As of the 2011/12 campaign, the single Regional Direction of Banfora ordered 3,000 cotton made purchase tarps of which 2,400 was supplied to GPC.

Currently, all the three companies (SOFITEX, Ivoire Coton and CMDT) use Polyethylene (PE) packaging to pack cotton balls. They have also experience in the use of a cotton fabric in wrapping cotton balls. This experience was quickly abandoned due to the frequent tear and dirty of the balls during handling operations in ginneries and in ports.

For farmer organizations union, the project objective is noble and the CCPP has been well received by producers who have benefited awareness creation, equipment and training. Farmer organizations are aware of the strong
quality degradation suffered by African cotton in recent years. According to them, the implementation of this project will allow to burnish its image. The non-contaminated cotton must be better sold in order to provide more income to producers, cotton companies and States. The project is, according to farmer organizations, in a straight line with the cotton quality improvement objectives of African cotton subsectors. 

Cotton companies and producer organizations marks are shared by the ACA and the AProCA which have in common quality, African cotton image and producers incomes improvement. This justifies their strong involvement in the seed Cotton Contamination Prevention Project in Africa. They have decided to support the project actions by:

- Signature of a partnership agreement between ACA and AProCA for the implementation of the action plan against contamination and to share the costs and benefits between producers and cotton companies.
- Conclusion of an agreement on the principles to include harvest kits in the technical package, and sharing equally the cost in the same way as that of the premium from the improvement of the quality.
- to include the contamination in the seed cotton and lint quality control
- Adoption of a standard definition of the marketable seed cotton, taking into account the non-contamination.
- Elaboration and signing in December 2011 of a quality Charter on good practices to control contamination, and the development of a handbook describing best practices to prevent any contamination at each stage of the cotton value chain.

The relevance of the seed Cotton Contamination Prevention Project in West Africa is perceived in the same way by all stakeholders in the cotton sector. They are all aware of the benefits of the cotton contamination control.

4.1.2. **Relevance with regard to poverty reduction**

The CCPP project will allow producers, through the use of recommended methods and tools, to reduce the percentage of poor quality cotton (2nd and 3rd choice) in benefiting better prices (1st choice) and the payment of a premium from the sale of non-contaminated cotton, which will improve their income.

Improving cotton farmers’ incomes through the payment of a more reasonable price and a premium is undoubtedly one of the best ways to alleviate poverty.

4.1.3. **Relevance of used means to face contamination issue**

The Prevention of seed Cotton Contamination Project (CCPP) in Africa aims to:

- Identify, educate and train in 3 years, 9,000 producers by country as well as extension service staff, transporters and concerned ginning units agents;
- Develop a program that favor the voluntary adoption of contamination reduction techniques by 27,000 participating producers including appropriate measures;
- Ensure that the less contaminated cotton is supported and marketed to take advantage of its status associated benefits (premium on the international market).

Means used to achieve its objectives are the establishment of a strong strategy of awareness creation, stakeholders’ equipment and training, contamination determination and prevention, the promotion and dissemination of non-contaminated cotton.

Awareness creation is one of the best ways to reach project targets; in the case of the CCPP, it concerned both producers and agents of the project area, than those of non-project area. The strategy used has enabled the project to exceed its objectives in number of producers (30,000 reached against 27,000 planned) despite the Ivorian crisis which has not helped Ivoire Coton in driving normally its activities.

The project awareness creation and information strategy was good and well suited to the context. A leader farmer did remember that it was the awareness creation that allowed producers to know the world cotton market. Today, they know not only that this market exists, but that the price of cotton paid from them depends on.

In connection with the cotton companies and producer organizations, the project approach has been to train advisory agents (trainers) that are responsible for producers training. Training has been strengthened by inter-farmers tours either at regional or national level to enable more exchange between producers and mentoring agents of other societies or countries.
The project equipment strategy has been to avail to producers completely cotton made kits comprising harvest bags, purchase webs or small tarpaulins and storage tarpaulins. All proposed facilities are locally manufactured with non contaminant materials. They are biodegradable, environment friendly.

The analysis of the project area cotton samples compared to those of non-project areas is a way for measuring the impact of used means (awareness creation, training, equipment) on the contamination decline.

The payment of a premium to producers and cotton companies, follow-on their efforts to contamination control through improving the quality and the image of African cotton will ensure the sustainability of the action.

The involvement of local and regional partners through National Consultative Committees (NCC), the African Cotton Association (ACA) the Africans cotton producers’ Association the AProCA and the West African Economic and Monetary Union (WAEMU) ensures project activities dissemination out of its operations area and allows the development of texts and regulations for the contamination control to improve the competitiveness of African cotton.

All used means are available in the project area, adapted to the contamination control, because not pollutants, without negative effects on the environment, because they are all biodegradable and are relevant to the contamination control.

V. Analysis of implementation

5.1. Project and activities management

The project is implemented by the International Fertilizer Development Center (IFDC) in partnership with the 3 cotton companies: SOFITEX in Burkina Faso, Ivoire Coton in Côte d’Ivoire and CMDT-Sud in Mali. These cotton companies are subcontracted to IFDC and responsible for the implementation of a large part of the project in their intervention areas. In each country, a National Advisory Committee is established to assess, inform and disseminate the project results at national level.

At national level, the project is managed by a National Coordinator who is in relation with the cotton company, producer organizations and the National Advisory Committee. Coordinators of Burkina and Mali are IFDC agents; the one of Côte d’Ivoire is a consultant, IFDC not having representation in this country.

The project endowment, by the IFDC, with 5 senior staff (3 National Coordinators, 1 Monitoring & Evaluation officer and 1 accountant) used full-time (100%) and a regional coordinator at 50% of his time, has been a favoring element to the achievement of results through facilitation, awareness creation, creation of linkages between various actors, the immediate search for solution to raised problems. Activities of these senior staff within the IFDC have accordingly, not at all hindered the project.

Contracts management with cotton companies

At the level of cotton companies, a service delivery contract is signed in agreement with terms of reference, technical and financial proposals developed for activities to be undertaken. Supervision activities are assured by the General Directorate of the cotton company and the project National Coordination.

Services delivery contracts of year 2012 (3rd year of the project) were concluded on the following dates:

July 11th, 2012 and valid from May 1st, 2012 to March 31st, 2013, for SOFITEX,
July 20th, 2012 and valid from July 20th, 2012 to April 30th, 2013 for Ivoire Coton
In each contract, figures the amount of money to be availed by the project for activities implementation split in two installments and the counterpart amount of the cotton company. The 1st installment payment is done at the signature of the contract on a "cotton company/PPC" account upon the receipt by the project of transfer request letter from the cotton company. The payment of the second installment is linked to the delivery of technical and financial reports on activities implementation (awareness creation, training, monitoring). Payments are made 15 days after the filing of the invoice by check or bank transfer. The supervision of the management of funds allocated to cotton companies is provided by the project accountant in Bamako, travelling in the field to ensure the proper performance of terms of the contract.

Despite this good organization, a delay was noticed in the payment of cotton producers training related costs in the 3rd year by SOFITEX. They had not yet been paid when the evaluation mission visited them in early December 2012. This delay was consecutive to the non-delivery of financial reports relative to the justification of amounts previously advanced by the project. The problem has been set on following a 04 days mission of the project Regional Coordination accountant in Bobo in November 2012. The financial report was forwarded in Bamako on November 19, 2012.

Delays in funds disbursement in 1st and 2nd year have negatively affected some activities implementation in Mali, especially those relating to the dissemination of the technical routes of extension. In 1st year, the branch received funds in October and in September for the 2nd year while activities had started in June/July. These delays are mainly consecutive to the delay in contracts signing and not to delay on the contract implementation.

Differences were also observed in the payment of training fees due to producers from one country to another. These charges were 750 CFAF (US$ 1.5) per day and per person in Burkina Faso and Mali and 3,000 FCFA (US$ 6) per day and per person in Côte d'Ivoire.

According IFDC, the four training sessions for producers (technical routes, crop health treatments, harvest - primary storage - storage and marketing of seed cotton) were paid once in Côte d'Ivoire (CFAF 750 x 4 = CFAF 3000). While in Burkina Faso and Mali, farmers receive 750 FCFA each session.

Generally, signed contracts with cotton companies have been well managed to stakeholders' satisfaction.

Activities Monitoring and Evaluation

Monitoring and Evaluation officer is committed to manage data collection and analysis, training cotton companies agents in charge of data collection, development and dissemination. It is responsible for the definition and updating of the project targets and indicators.

He undertook baseline surveys on producers and cotton companies in 2010 and 2011 and a casual survey on kits use in 2010.

In the project performance and impact monitoring, it fills in the logical framework monitoring table for the implementation of project activities.

The mission found a weakness in the updating of the logical framework data some which do not match the projection of the monitoring table. For example, concerning the seed cotton production projection for year 2, the logical framework projected 65,000 tons, while on monitoring document, the updated figure of 92,840 tons was written.

National Consultative Committee

The National Consultative Committee (CCN) comprise 8 to 10 members whose mission is to advise project national coordination on countries direction, strategies and priorities, while seeking synergies with the strategies and priorities of the regional level. It participates in the formulation of annual work plans, and the evaluation of progress achieved in their implementation. It serves as a link between the project and other structures involved in the cotton sector. The NCC is generally chaired by the union of farmer organizations (UNPCB in Burkina, AFFICOT-CI in Côte d'Ivoire and a UN-SCPC in Mali). This position allows a greater involvement of producers, who fully appreciate it, to project activities. Also, the presence of State representative (Ministry of Agriculture) in the Committee gives it greater legitimacy.
Members of National Consultative Committees (NCC) were selected based on their link with the cotton subsector in the context of production, ginning, marketing, agricultural research, textile research, quality control, pest control, the legislation or regulations. In each country, the NCC members were the transmission belt between the project and public services one hand and the other cotton companies and producer organizations that are outside the project area on the other hand.

The CCN members participate in the 2 annual meetings planned
- April: annual activities program planning and reporting of implemented activities,
- December: Meeting on activities evaluation, field visit.

During its meetings and field missions, the Committee gives its opinions on equipment and project activities. It is in this frame that suggestions were made to the project, by CCNs, on the following points:
- Timely provision (no later than late September) of kits for an efficient use of this material;
- Improvement of harvest bags and purchase tarps;
- Increase in number of harvest bags per farm (at least 10);
- Increase in number of storage tarps per farm (at least 2 tarps) to allow a better protection of the cotton. This suggestion was not retained,
- Endowment of producer organization (PO) with purchase tarps (10 per PO) to better protect cotton on the marketing ground that was retained.

It is also in this context that in Mali, the CCN proposed to contact the CERFITEX for the submission of a harvesting bags prototype. It also got in touch with the water and forests service relative to timber cutting permissions for fencing construction. CCN strongly supports the dissemination of project activities in other areas.

In Côte d’Ivoire AFFICOT-Cl has even sought to make kits for cooperatives that are not involved in the project and is willing to avail, to the cotton sector, it allocated time frame at the national television for producers awareness creation.

CCN has enabled the establishment of a climate of trust between stakeholders around a common objective: improving African cotton quality and image. It has been one of the most effective elements in the awareness creation and the mobilization of stakeholders around the contamination problems.

5.2. Annual work plan, implementation timeframe and compliance to implementation deadlines

Annual work plans drawn up by the project comply with the canvas sets in the manual for projects preparation and management to be financed by the Common Fund for Commodities (appendix IV). They are also consistent with the project logical framework.

A work plan by country is developed. It presents monthly activities, focal points for their achievement and partners involved. Cotton companies, CCN producers and members are highly involved in their design and implementation.

The implementation schedule is annually developed and prepared in the form of bar chart. It indicates by components, the activities monthly implementation by specifying partners involved.

The project logical framework is well designed as a whole. It presents yearly the intervention logic, objectively verifiable indicators, planned targets, the means of verification and assumptions.

In 2011, on the 45 indicators to inform, 40 have been and 5 could not be, a rate of 89%, which is satisfactory. Most activities (75%) were over 100% achieved. For details see table 8 in appendixes. Activities that could not be achieved include: (1) the total value of less contaminated cotton lint sales, (2) the percentage increase of income of targeted cotton producers (reissued premiums), whose target was 5%, (3) the percentage increase of partners cotton companies income with the targeted objective was also 5%, (4) premiums are identified and shared between cotton companies and producers, (5) a market study on the less contaminated cotton marketing. The reasons for the information shortage for the first 4 entries are known, they are related to the non-marketing of the non-contaminated cotton lint. For the fifth topic, the explanation provided by the project was that a market survey does not seem relevant to solve the issue of non contaminated cotton marketing. The market survey could be useful for the discovery of “a niche market”. In fact, any lint buyer targeting high class textile market is interested
in getting less contaminated cotton. This study should have allowed an improvement of African cotton image in order to avoid price reductions of cotton assumed contaminated.

The project was initiated in accordance with CFC management principles, the development and dissemination of various monthly, bi-monthly, quarterly, semi-annual and annual reports.

The timely development and dissemination of these various reports enable CFC, EU and CAC to better follow the project implementation and give necessary guidance for its proper implementation.

Generally, the project implementation deadlines have been met despite problems relative to the Ivorian crisis in 2011. The project even exceeded its objectives in number of producers (30,000 planned against 27,000 or 111%) and production of non-contaminated cotton (118,270 tons in 2nd year up on a projection of 92,840 tons or 127%).

5.3. Conducive and/or non-conducive factors to the project implementation

Conducive factors

Several factors favored the project implementation including;

- uniqueness of the decision centre
- experience and proximity of cotton companies,
- good involvement of national and regional partners, particularly producers,
- availability of funds for activities implementation,
- producers motivation through the free supply of kits and the payment of Per diem for training.

Uniqueness of the decision centre

Entrusting to a single structure (regional coordination) the management of a project across 3 countries, has had several advantages among which (i) harmonization of approaches and tools used by countries, (ii) the distribution of the same type of equipment under the same conditions, (iii) the reduction of kits acquisition costs using grouped orders.

The uniqueness of the decision center could be a disability if decision making takes too long because of the administrative burden.

Experience and proximity of cotton companies

All selected cotton companies are cotton production, ginning and marketing professional. They were already aware of the cotton contamination problem and each of them had initiated activities but without getting to solve it. Training modules have been prepared and disseminated with their strong commitment, as well as equipment management. The proximity of the three cotton companies in their border areas has facilitated contacts and experience exchanges between national coordinators and cotton companies on one hand and between producers on the other.

Good involvement of national and regional partners

Producers and local partners involvement at national level through the National Advisory Committees and regional partners through the African cotton producers Association (AProCA) African Cotton Association (ACA) and the West African Economic and Monetary Union (WAEMU) helped to give a continental dimension to the project and more commitment at regional level.

Funds availability

Funds availability allowed to ensure the successful implementation of activities within the time frame. The project has, in agreement with its commitments before cotton companies, availed to the later necessary funds for activities implementation. In case of delay, most of the cotton companies pre-financed, in the meantime, before getting funds at their disposal.

Producers Motivation

All producers encountered by the evaluation mission have expressed their satisfaction with not only the free distribution of harvesting bags, but also small tarpaulins (purchase canvas) and large tarpaulins as their organization had used to pay. Kits received as project support has helped farmer organizations (OPs) to save money on the purchase of purchase canvas and tarpaulins. The global economy achieved by OPs amounted to
CFAF 500,178 million, of which CFAF 234 million (90,000 purchasing tarps x CFAF 2,600), for purchasing tarps, and CFAF 266,178 million (40,330 storage tarps x CFAF 6,600) for storage tarps.

Also, the payment of training Perdiem at a rate of CFAF 750 in Burkina Faso and Mali or CFAF 3,000 in Côte d'Ivoire created more motivations from learners. According to producers to receive knowledge (education) and be supported for its free acquisition (Perdiem) were, for them, unexpected and highly motivating.

**Unfavorable Factors**

The factors that have been unfavorable to the project implementation include mainly the complexity of the problem and the non mastery of the non-contaminated cotton sale market.

Indeed, all cotton companies are aware of the dangers and the negative impact of the contamination on their product. The commitment of ACA, AProCA and WAEMU witness the scale of the problem on the continent. WAEMU and some large international traders believe that West African countries lose 2-3% of the cotton value they sell because of the perception on the world markets that they are contaminated with polypropylene fibers and nylon. Traders and spinners perception on the contamination of African cotton is higher than the contamination itself. To technical measures to fight contamination should be added a greater sensitization of traders and spinners regarding arrangements at ACA and AProCA level to place African cotton among less contaminated origins in 2015.

In recognition of the problem, ACA (African Cotton Association) held a technical workshop in Cotonou in November, 8th to 10th, 2006 on the African cotton quality. Nine African countries, including C-4 countries, Côte d'Ivoire, Senegal and Togo in the franc zone, as well as Sudan and Zambia, have made presentations on the cotton quality and the contamination issue.

However despite this strong commitment, less than a dozen countries are cited as an example in the contamination control in Africa: Zambia, Zimbabwe Mozambique, Cameroun, Senegal etc.

The implementation of the project coincided with the period of good behavior of world cotton prices, time during which traders claims are rare, therefore less fears on contamination in this period and less motivation of cotton companies commercial for difficult commitments.

Also, the presentation to the client of a non-contaminated product without a proof and the warranty on the non-contamination has been an obstacle to the sale. The non-contaminated term was considered too strong by some players who opposed the cotton uncontaminated with the rest of the cotton assumed to be contaminated.

If the project was waiting for a reaction from cotton companies for the sale of non-contaminated lint, they relied on the project to find a guarantee of non-contamination on one hand and secondly to link them to traders and spinners willing to buy the product. Nobody can take the risk to present a certificate of non-contamination, because it is difficult to find cotton completely free of contamination. But buyer does not trust the statements without a guarantee on the non contamination of cotton. The problem lies in the inability to ensure the absence of polypropylene and the risk of claims.

In response to this expectation of cotton companies, Asian (Vietnamese and Bangladeshi) traders visit in the project intervention areas in Burkina Faso and Mali from in January from 9th to 14th 2011 has been organized, but this was not enough to initiate the sale, despite visitors determination to buy the product and their commitment to pay a premium to producers. The role of the project in the marketing of non contaminated cotton lint is to easier the contact between cotton companies and potential buyers of the lint rather than selling it.

Asian traders and cotton companies have faced the problem of non-compliance for sale and purchase procedures. The traders wanted to buy in Cost and frets (CAF) while the cotton companies sell FOB position, African port. But this is not the only problem; some cotton companies affirmed that they could sale their cotton directly to traders and spinners without a preliminary agreement of their banks at whose level the entire lint production is secured in order to reimburse loans granted within the frame of the cotton production campaign funding.

Definitely, apart from the 200 tons of non-contaminated lint sold by Mali with only CFAF 26 premium, no other transactions could be completed.

This context has been unfavorable to the lint sale and to premium payment to producers.
5.4. **Opportunity of adaptations carried out during the implementation**

The implementation of a project cannot be carried out without difficulties, but it is the ability of the project field implementing agency to deal with the problems that will determine its success. Major issues faced by project and adaptations made are:

- the Ivorian crisis,
- the low quality and harvesting bags, purchase canvas and storage tarpaulins shortage,

Face to disturbances created by the Ivorian crisis in 2011, the project decided to increase, in year 2, the number of producers to be supervised in Burkina and Mali. Thus, instead of 3,000 producers provided by year and country, these two countries have framed each 8,500 producers making an overflow of 183% of the initial target. Côte d'Ivoire had realized 1,000 producers or one third (33%) of its program. This program adaptation has enabled the project to reach, or even exceed by 11% (30,000 producers against planned 27,000) management objectives.

It should be recalled that the crisis has not allowed the Ivory Coast to reach all expected results: the frequency of samples with polypropylene and contaminants packaging is twice lower in Mali than in Côte d'Ivoire, in 2011, the percentage of head types (good quality of lint), except Côte d'Ivoire has improved in the other two countries.

It should be noted that the Malian crisis, triggered following the coup d'état of March 22nd, 2012 did not impact the implementation of the CCPP project, the project area located to the South of the country, while the areas occupied by the rebels and Islamists is in the North.

Regarding the poor quality and shortage of harvesting bags, purchase tarps and storage tarps in 1st year, the project has taken steps to not only improve kits quality in 2nd and 3rd years, but also to increase their numbers in order to meet producers aspirations. For more details, see the equipment strategy in the chapter: relevance of the means used to address the contamination problem.

5.5. **Availability of co financing and counterpart contributions**

The project co-funding was assured by the World Bank for U$ 600,000 to support the project activities for a change of national and regional laws on the cotton contamination. It is in this context that a work plan on the cotton contamination prevention has been developed in 2011 and which focuses on 4 major activities: (i) support to the change of the national standards of cotton quality in Mali and Burkina Faso, (ii) support to the change of regional regulations (iii) support to ACA program for the contamination prevention (iv) studies.

For the implementation of its funded pane, the World Bank through its sustainable development network WB-SDN Africa region has collaborated with the International Trade Center (ITC), the Common Fund for Commodities (CFC) to promote the prevention of cotton contamination in West Africa.

A Consultant was hired by the World Bank and the ITC for the implementation of the work program on activities of the Prevention of seed Cotton Contamination Project in Africa (CCPP).

Complementary interventions of the World Bank focused on institutional links, regulatory aspects, respect of the payment of incentives to producers, the introduction of the contamination in the ranking system of seed cotton and fiber.

The World Bank has achieved advocacies at both national (Burkina Faso, Mali) and regional (WAEMU, ACA, AProCA) to promote techniques and benefits of prevention of seed cotton contamination and ensure the sustainability of efforts to extend non contaminated cotton production techniques. More specifically, the World Bank brought its support to the African Cotton Association (ACA) to implement its action plan against contamination, adopted in 2010 in Cotonou, Benin, which aims to place African cotton among the least contaminated origins in 2015.

It is in the framework of the implementation of this component funded by the World Bank that the ACA has organized in 2011 five (5) meetings:

- 1st and 2nd February, 2011 in Ouagadougou, meeting between the ACA and the AProCA to discuss problems of preventing cotton contamination and the respective role of each association in the promotion of clean cotton. A regional technical commission for the implementation of the first phase of the program has been established.
- 14th-15th-16th April, 2011 at Abomey-Calavi (Benin) holding of the first meeting of the regional technical commission. The purpose of this meeting was to review the existing regulations and procedures on cotton contamination in West and Central Africa and to propose a standard definition of marketable seed cotton taking into account contamination.

- A second meeting of the regional technical Committee was held in Bamako (Mali), 18th-19th-20th August, 2011 to discuss the draft quality Charter and the manual of procedures describing good practices to prevent contamination at each stage of cotton value chain.

- A meeting of ACA and AProCA Steering Committee was held in Dakar, Senegal, September 19th-20th-21th, 2011 to discuss and validate the quality Charter and the manual of procedures and to prepare the tender documents for the edition and publication of these documents.

- A regional meeting of A.C.A and AProCA, with the participation of representatives of WAEMU and IFDC, was held in Ouagadougou (Burkina Faso), 14th-15th-16th December, 2011 to validate results of the first phase of the action plan against contamination, officially signed the quality Charter, define the process of dissemination of documents, and to develop the second phase of the action plan.

The World Bank has funded the edition and publication of 10,000 copies of the quality Charter, and 3,000 copies of the manual of procedures. These documents are being distributed to the inter-professionals, producers associations, cotton companies (ginners), inputs suppliers, transporters, forwarding agents and shipping companies, international traders, concerned ministries and institutions (agriculture, industry, trade, research and development, etc.), technical and financial partners, NGOs and donors in eight Western and Central African countries (Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Mali, Senegal, Togo).

The World Bank co-funding allowed achieving the following results:

- The partnership agreement between A.C.A and AProCA for the implementation of the action plan against contamination and the costs and benefits sharing has been signed.

- Members of A.AC (ginners) and AProCA (producers) reached an agreement on the principles of clean cotton harvest kits inclusion in the standard package, and sharing their cost (50/50).

- A.C.A and AProCA have agreed to share any eventual premiums/gains received upon the sale of non contaminated cotton and to include them in cotton pricing mechanisms.

- A.C.A. and AProCA decided to include contamination in the quality control system of seed cotton and fiber.

- A standard definition for the marketable seed cotton taking into account the contamination was adopted by ACA and AProCA.

- A quality Charter on good practices to fight contamination, and a manual of procedures describing good practices to prevent any contamination at each stage of the cotton chain of value were developed and validated.

- The "quality Charter" was officially signed by ACA and AProCA presidents during the regional meeting which was held in Ouagadougou in December 2011.

- 10,000 copies of the French version of quality Charter were printed

- 3,000 copies of the French version of the manual of procedures were printed

- The distribution list and dissemination plan of the quality Charter and the manual of procedures in each participating country have been established. National technical committees will be responsible for distribution to interested parties in each country.

- Procedures to supervise contamination in lint samples at ranking centers in each country have been defined.

- Training programs of cotton value chain stakeholders (producers, extension workers, purchasing agents, ginners) have been developed based on the content of the manual of procedures.

The World Bank co-funding helped the awareness creation of ACA, AProCA and WAEMU policy-makers on the changes of regional legislations and Governments to promote national legislation on the contamination. It should be reminded that the Quality Charter and the manual of procedures were certainly distributed at cotton companies’ levels, but awareness creation and training activities of their agents and producer organizations leaders, and other partners had not yet started during the passage evaluation field mission.

Regarding counterpart contributions, stakeholders involved in the project implementation committed themselves to contribute to its funding through in kind contributions, estimated in cash for a expected total amount of US $ 1.5
million making US$ 452,000 per year for 3 cotton companies, US$ 21,000 per year for farmer organizations for a total of US$ 473,000 per year for these two partners which amounts to US$ 1,419,000 for the 3 years of the project. IFDC, the project implementing agency planned to bring in the complement i.e. US$ 30,667 for year 1 and US$ 99,500 for year 2 thus a total of roughly US$ 130,000.

These contributions which total amounted to US$ 1,549,000 will allow to cover the level of initially planned contributions (US$1,500,000)

The counterpart considers the total implementation cost of some activities, transportation expenses (staff transport, kits delivery at village level), part of salaries of frontline agents, trainers and other cotton company executives (50% of extension agents, enumerators and trainers salaries, 30% for heads of sectors and assistants, 20% for other officers of the cotton company over a period of 7 to 9 months). Right from the start, cotton companies have made clear that it would impossible for them to contribute to the purchase of harvesting kits. However companies contribute to the implementation of the project up to this moment an amount of 1,075,000 usd of contributions have been registered (the third project year not yet completed).

The co-funding of planned activities is as follow: (i) extension workers training, (ii) industrial agents training, (iii) producers training, (iv) transporters training, (v) activities monitoring, (vi) data collection, (vii) documents preparation

The funding of planned activities is supported by the project for approximately 30% as well as by the cotton company for his contribution of 70%. For example out of the planned FCFA 159,998,900 to fund project activities for 2012/13 campaign in CMDT-South Ltd, CFAF 46,005,800 or 28.8% will come from the project and CFAF 113,993,100 i.e. 71.2% will represent of the cotton company.

5.6. Budget compliance

The total amount of the budget adjusted for the project 3-year is US$ 4,000,991 (US$ 1,520,366 for year 1, US$ 2,683,219 year 2 and US$ 1,597,800 for year 3). The achievements as at late October 2012 amount to US$ 4,390,570.61 or 87.97% of projection. The level of achievement for years 1 and 2 completely sealed off is 80.72% (US$ 3,393,200.39 out of a projection of US$ 4,203,385). The share of overhead costs (US$ 325,227.45) represents 8% of direct costs and 7.41% of the total cost, which is in line with the standards (8% of direct costs). For the detail see table 7 in appendixes.

The budget design and monitoring are in harmony with CFC procedures with regard to its decomposition into 10 categories: (i) vehicles, machinery and equipment, (ii) Public Works, (iii) Materials and Supplies, (iv) Staff (v) Technical Support and Advice (vi) Professional Travels, (vii) Diffusion and Training (viii) Operational Costs (ix) Supervision, Monitoring and Evaluation (x) Contingencies. Categories i to viii are performed by the implementing Agency (IFDC) and the rest by CFC.

Category II relating to public works, having not been planned in the CCPP, achievements distribution by expenditure categories was as follows: Equipment (2.79%), Materials and Supplies (39.14%), Local Staff (14.95%), Technical Assistance and Advice (6.63%), Professional Travels (4.37%) Diffusion and Training (21.62%), Operational Costs (3.09%) and overhead costs 7.41% of the Total.

The level of achievement over the project three years projection as at end October 2012, was: Equipment (100%), Materials and Supplies (95.44%), Local Staff (76.45%), Technical Assistance and Advices (132.02%) and Professional Travels (85.94%) diffusion and Training (77.97%), Operational Costs (82.31%) Total Direct Costs (88.24%), Fresh General 84.73% and Total Project 87.97%.

Budget estimates have been exceeded on one category of expenses: the technical and advisory support (132%) whose weight is only 6.63% of total spending.

There is a balance of US$ 600,429.78 which corresponds to the gap between the projection and achievements of the running year 3.

The highest expenses line was the one of materials and supplies with US$ 1,718,680.90 or 39.14% of the total on which US$ 1,716,319.29 (or 99.86%) was spent on the purchase of 30,000 kits intended for producers making an average of US$ 57.21 per kits, much lower (-10,60%) than the US$ 64 in the project preparation draft document.
Regarding the training of 30,000 producers, the total cost realized was U$ 343,759.01 or U$ 11.46 per producer and U$ 5.21 per producer per training session, where 36,000 producers (9000 in year 2 and 27 000 in year 3) benefited from a recycling (upgrade).

On the transporters and cotton industrial agents, the total cost realized was U$ 8,334.68 for 1,509 people (240 transporters and 1,269 industrial agents) or an average of U$ 5.52 per person and U$ 4.88 per person per session considering the recycling of 200 transporters (120 in year 2 and 80 year 3).

The use of 87.97% of the financial resources has helped implementation of 98% of the project activities. These results indicate the sound management and efficient use of project resources, despite some difficulties in its implementation (namely the Ivorian crisis).

VI. Impact Analysis

6.1. Project results with regard to objectives and targets

6.1.1. Results presentation

The main results of the project in respect of the first, second and part of the third year are listed in the following table. For each activity, the objectives are recalled, the level of achievement and remarks are displayed.

**Table 1: Project results with regard to objectives and targets**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Objectives</th>
<th>Achievements</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity 1.1</strong>: Identification of the areas, involved producers groups and extension agents</td>
<td>To involve 27,000 producers in the 3rd year and 173 extension workers for non-contaminated cotton production.</td>
<td>30,000 producers (including 11,500 for Burkina Faso, 11,500 for Mali and 7,000 for Côte d'Ivoire) on an initial of projection of 27,000 (or 111%) forecast, members of 1,830 cooperatives or producer groups are involved, and 168 extension workers on a projection of 173 (or 97%) were trained in the cotton regions of Banfora and N'Dorola in Burkina-Faso, M'Bengué in Côte d'Ivoire and Sikasso in Mali.</td>
<td>The apparatus, interventions areas, involved cooperatives and producers were identified in consultation with farmer organizations and partners cotton companies: SOFITEX (Burkina Faso), Ivoire Coton (Côte d'Ivoire) and CMDT south branch ltd (Mali).</td>
</tr>
<tr>
<td><strong>Activity 1.2</strong>: Stakeholders' awareness creation for the non-contaminated cotton production</td>
<td>To inform and educate 27,000 producers, extension agents and other project partners and non-project on the production of non-contaminated cotton</td>
<td>30,000 producers have been informed and sensitized (111%)</td>
<td>It is about all stakeholders (local authorities and officials representatives of the cotton sector), cotton companies agents and producers from the project area.</td>
</tr>
<tr>
<td><strong>Activity 1.3</strong>: Training of extension workers and producers.</td>
<td>To train in 3 years 173 extension workers and 27,000 producers, organize 15 field visits including 13 at national level and 2 at regional level</td>
<td>The project has developed 4 training modules and trained: - 168 extension agents or 97% of which 45 in Burkina, 51 in RCI and 72 in Mali, - 2 other agents of SOFITEX - 30,000 producers (111%). - 7 filed visits organized (46%) of which 6 at national level and 1 at regional level</td>
<td>It is about modules on: -Crops management, -crop Protection - Coton harvest and storage - Ginning. Training sessions start varied from one country to the other. The 9 visits planned for year 3 have not yet been organized.</td>
</tr>
<tr>
<td><strong>Activity 1.4</strong>: Support and monitor producers performance during seed cotton harvest and collection periods to better target the actions to conduct</td>
<td>To collect data from producers (5% of the number) and cotton companies</td>
<td>Development of 2 questionnaires of which 1 for producers and 1 for the ginning industries. Training of 58 enumerators of which 11 in Burkina Faso, 16 in Mali and 31 in Côte d'Ivoire. Field implementation of surveys and data processing at the level of: Year 1: 300 farms surveyed in Mali and Burkina Faso Year 2: 200 in Côte d'Ivoire, 425 in Mali and 425 in Burkina Faso. A casual survey was conducted in 2010 on kits quality.</td>
<td>In year 1, surveys were conducted on December from 24th to 29th, 2010, at industries level and from 03/01/2011 to 07/02/2011 at producers' level. Surveyors training and surveys implementation in Côte d'Ivoire for the 1st and 2nd year were conducted in November 2011. In Mali and Burkina Faso, trainings were done from 15 to 22/01/2012 and surveys from 15/01/2012.</td>
</tr>
</tbody>
</table>
Out of a total of 45 indicators for monitoring, 40 have been completed 3 were withdrawn in year 1 due to lack of data.

### Component 2 : voluntary adoption of techniques by producers

#### Activity 2.1: Identification des équipements.
- Harvest bags (435,000), purchase tarpas (90,000) and storage tarpas (46,200) are availed producers.
- It was distributed to project producers:
  - 435,000 harvest bags (100%)
  - 90,000 purchase tarpas (100%)
  - 40,330 storage tarpas (87%).
  - On the 3,000 storage tarpas of year 3 planned for Côte d'Ivoire, only 500 were delivered making a rate of 16.66%.

#### Remarks
- The producer kit comprises:
  - 10 harvest bags
  - 3 purchase tarpas
  - 1 storage tarpas
  - 10 storage tarpas for each Cooperative/GPC
- The 27,000 producers of the first two years received 15 bags in lieu of 10.

#### Activity 2.2: Ensure that equipment are manufactured and distributed as planned, and manage their uses
- Ensure a proper management of distributed equipment
- The kits were managed by the cotton companies considering realities of each area.

#### Activity 2.3: Make sure that the seed cotton is harvested using preventive measures, and compare classification results to the conventional cotton
- Avoid cotton contamination of, during storage, transport and collection.
- Build rack storage at 30% of farms making 2,700 rack storages and renovate 338 storage silos in year 1.
- Determine the seed cotton contamination rate

#### Remarks
- Rack storages construction is having problems in terms of wood availability.
- Rack storage problem needs to be rethought in order to find a solution.
- Silos repair is not systematic considering the direct evacuation cotton (twinning) at the purchase time.
- The project signed in February 2011 service provision contract with CERFTEX.
- CERFTEX analysis focused on:
  - vegetal contaminants;
  - other organic contaminants;
  - polypropylene ;
  - other inorganic contaminants

### Component 3 : Ginning and marketing of non contaminated fiber

#### Activity 3.1: sensitize and training stakeholders in the lint value chain on the contamination control measures
- Select and train 240 transporters, 750 industry agents and determine the ginning period
  - 240 transporters (100%) and 1289 industry agents (169%) concerned by project activities have been trained.
  - The ginning of the project area began in late October and early November 2012, depending on countries.

#### Remarks
- The CCPP cotton ginning will concern in all 9 industries including 4 in Burkina Faso (Banfora II, Kebede, Bobo 1 and Bobo 2) 4 in Mali (Koumantou Kignan, Sikasso 1 and 2) 1 Côte d'Ivoire (M'Bengué). The ginning campaign end will take place April 2013, depending on countries.

#### Activity 3.2: Make sure that the project cotton purity is preserved throughout the lint production chain and make recommendations
- Determine the seed cotton contamination rate

#### Remarks
- Analyses results show the decrease of the contamination level from 2010/11 to 2011/12.
- The analysis of 2011/12 samples concerned Côte d'Ivoire and Mali, those of Burkina were unable to reach CERFTEX.
### Activities

<table>
<thead>
<tr>
<th>Activity 3.3</th>
<th>Objectives</th>
<th>Achievements</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work with the cotton companies and traders to promote uncontaminated cotton, do recognize a label and benefit from a premium.</td>
<td>Promote 95,000 tons of seed cotton and 40,000 tons of fiber for the project year 1 and year 2. Provide information on the quality of ginned cotton and data on the international market. Consider giving a premium quality to the producer. Provide information on the quality of ginned cotton and data on the international market. Consider giving a premium quality to producer.</td>
<td>The total seed cotton production was 143,223 tons in 2 years (145%) including 24,953 tons in year 1 and 118,270 tons in year 2. The lint production was 59,502 tons (149%) including 10,221 tons for year 1 and 49,281 tons for year 2. The following results were achieved in terms of improving the cotton lint quality through the % head type. - Burkina Faso: 91% project area against 83% non-project area - Côte d'Ivoire project area 61% against 55% non-project area - Mali: 92% project area against 83% in non-project area. Apart from the 200 tons of non-contaminated lint sold by Mali with a premium CFAF 26/Kg, no other attempt was undertaken. No premium has been distributed to producers.</td>
<td>Poor quality cottons (2nd and 3rd choice) have completely disappeared in farmer organizations involved in the CCPP project. The quality improvement is perceptible at all levels (cotton companies and producers). A meeting was held in mid February 2011 in Yamoussoukro between the project team, sales departments and Focal Points of the 3 cotton companies to develop work plan in 3rd year to get commercial information and begin the non-contaminated cotton sale process. Cotton companies stir up the difficulty to pay a premium to uncontaminated cotton producers. The question is still under discussion.</td>
</tr>
</tbody>
</table>

### Activity 3.4

Promote and disseminate the results of the project in the three countries and in the region, the interests of the farmers. Promote and disseminate project results in the three countries of intervention and the region, defend farmers’ interests. | Promote and disseminate project results in intervention countries and in the region. Defend interests of farmers who produce quality cotton. | Project results are diffused through the channel of National Advisory committees (CCN), exchange visits, meetings with the technical and financial partners. ACA and APpC developed and signed a Charter and a quality cotton contamination control procedures manual. 10,000 copies of the Quality Charter and 3,000 copies of the manual of procedures were distributed. | The involvement of all stakeholders at national regional levels has allowed to know the PPC project, far away, beyond the borders of its operations area. |

The average rate of implementation of main activities is satisfactory (98%). The level of achievement reached and exceeded 100% of 75% of activities. For the detail see table 9 in appendixes.

- Number of mentored producers: 111,11%
- Amount of non-contaminated seed cotton produced (tons): 150,76%
- Quantity of non-contaminated cotton lint produced (tons): 148,76%
- Number of trained trainers: 109,80%
- Number of trained producers: 111,11%
- Number of trained transporters: 100%
- Number of trained industry staff: 169%

Activities whose level of achievement is below objectives are:

- Number of storage covers: 87,29%
- Premiums are generated and shared between companies and producers: 0%
- Total value of sales of less contaminated cotton lint: not available
- % increase in income of targeted cotton producers (premiums distributed): 0%
- % increase in target cotton companies income: 0%
- A market survey: unrealized

### 6.1.2. Analysis of results

**Component 1: Stakeholders’ identification, awareness creation and training**
Activity 1.1: Identification of areas, groups, producers and extension workers involved.

The strategy of the project for producers’ awareness creation, information, training and equipment was to sign service delivery contracts with the 3 cotton companies (SOFITEX, Ivoire Coton and CMDT-Sud) for the implementation of its major field activities. These companies being extension professionals already benefited producers’ trust, which easier project incursion in these areas.

Prior to the site selection, the project organized in Ouagadougou, March 8th – 11th, 2010 a stakeholders meeting (CFC, IFDC, Burkina cotton sector, donors) on the preparation of the works planning phase and the development of approaches. This meeting was followed by national consultations that were held on April from 13th to 21st, 2010 and which had as objective to discuss with parties involved in the cotton sector in the regions and conduct national meetings on the project. Stakeholders meetings discussed the work plan, and made proposals regarding the establishment of the National Consultative Committees, followed by the appointment of contact persons by institution.

Inside the cotton companies, the project areas or sectors selection was based on (i) high concentration of producers; (ii) the production area accessibility; (iii) proximity of a cotton ginning industry; (iv) existence of contamination problems.

The choice of cotton producer groups or Cooperatives was based on (i) groups or cooperatives registered with sound management; (ii) existence of storage infrastructures. (iii) voluntary; (iv) openness to innovation; (v) existence of contamination problems.

Outreach efforts have helped the project involved 30,000 producers with 11,500 for Burkina Faso, 11,500 for Mali and 7,000 for Côte d’Ivoire on an initial projection of 27,000 (i.e. 111%) members of 1,830 cooperatives or producers groups, as well as 168 extension workers (against a target of 173 or 97%) in cotton regions of Banfora and N’Dorola in Burkina-Faso, M’Bengué in Côte d’Ivoire and Sikasso in Mali.

Despite the Ivorian crisis which disrupted the project activities from November 2010, objectives were reached due to the increase of producers number in Burkina Faso and Mali which mentored in year 2, each 8,500 producers instead of 3000 originally planned, Côte d’Ivoire could not reach more that 1000 new producers.

Activity 1.2: Awareness creation of the actors for non-contaminated cotton production

Awareness creation sessions, which theme focused on (i) the project objectives, (ii) contaminants (iii) activities to be implemented with emphasis on producer organizations and extension workers roles and responsibilities, were organized in 2010, 2011 and 2012 in and outside the project areas.

In addition to brochures doomed to producers and field agents of cotton companies, IFDC also developed a big size colored folder, edited in French and English on the clean cotton challenges, objectives, approaches, basic information and project partners. These documents are simple and easy to understand by a large audience.

Activity 1.3: Training of extension workers and producers

For the visibility of the project, 39 signboards (12 in Burkina Faso, 8 in Côte d’Ivoire and 19 in Mali) were put at the entrance of cities, villages and ginning industries involved in the project.

In addition to signboards, 20,000 brochures on the contamination control have been distributed to extension agents and producers from the project area (9,500 for SOFITEX, 2,000 for Ivoire Coton and 8,500 for CMDT-Sud. These brochures, edited in French in Burkina Faso and Côte d’Ivoire and in national language in Mali, easily allow users to recognize different type of contaminants and indicate means to fight again contamination.
A regional workshop was organized in Bamako on June from 7th to 11th 2010 by the experts of the three countries at a rate of 4 experts by country. These experts have developed 4 training modules related to (i) crop management (ii) crop pests control (iii) seed cotton harvest and storage and (iv) ginning. Theoretical trainings were followed by field practices. A recycling session of already trained agents and producers was organized the next year to further strengthen learners’ skills.

Module 1, meant for extension agents and cotton producers is relative to the technical routes of cotton cropping system (cotton, maize, millet, sorghum, fodder crops) puts an emphasis on the sound management of arable areas, the soil preparation techniques, sowing, organic and mineral fertilization and crops maintenance. The compliance and the proper application of this module will help to improve the productivity of different crops, which will allow to improve producers’ gross incomes.

Module 2, meant for cotton producers is relative to cotton pest control; make an overview on the knowledge of cotton pests, used pesticides, the program chemical treatments and on integrated weeds management (use of herbicides). This module needs to be improved in order to consider the environment protection challenge by reducing the amount of pesticides on cotton tree through the Integrated Pests Management (IPM) of Production.

Module 3, meant for cotton producers is relative to cotton seed harvest, storage and primary marketing, recalls definitions of harvest and different qualities of seed cotton (1st, 2nd and 3rd choice). It also recalls objectives of the early harvest and its interest in the preservation of cotton seed quality. The module puts particular emphasis on the prohibition of polypropylene (PP) and plastic bags in cotton harvest, and recalls mode and conditions of harvest bags use, racks storages and tarp cover cotton during transport and storage. The correct application of this module will allow to preserve cotton from contamination.

Module 4, meant for transporters and ginnery agents is relative to transport and ginning, puts particular emphasis on trucks selection and the respect of the cotton seed transport conditions, the storage location and prerequisites before cotton ginning. It clarifies the sampling mode and lint storage location. The correct application of this module will allow to transport and gin cotton avoiding its contamination by foreign bodies. It supplements provisions of module 3 avoiding any risk of contamination of during cotton ginning and transportation.

The materials used for training on these different modules are the trainer's guide and a basic document for the participant.

In General, the modules are well designed (easy to understand). They aim to improve seed cotton production, harvest, transport, storage primary marketing and ginning conditions.

Interv farmer visits (7 in all) have been organized at national level (6) and at the regional level (1) in order to allow concerned producers and extension workers to exchange with their hosts on best practices to control cotton contamination.

Each module or visit was aimed to strengthen capacities of producers, mentoring agents, industry staff, and transporters to control seed cotton contamination. The project hence trained in 3 years, 30,000 producers against a target of 27,000 (111%), 168 extension workers or 110 % of targets (45 in Burkina, 51 in Côte d'Ivoire and 72 in Mali), and 2 other agents of SOFITEX.

Training provided were well received by learners because theoretical training was immediately followed by practice on a farm on one hand, and on the other hand because of the project support in bearing training costs at a rate of CFAF 750 per day in Burkina Faso and Mali and 3,000 CFAF in Côte d'Ivoire.

Activity 1.4: Support and monitor producers’ performance during harvest and cotton seed collection periods to better target actions to be conducted.

The project initiated several series of baseline surveys on producers and cotton companies to allow better monitoring of their performance evolution. He also organized in 2010, a survey on kits distributed to producers. For baseline surveys implementation, two questionnaires have been developed including one for producers and the other for the ginning industries. Before the start of the survey, 58 investigators (11 in Burkina Faso, 16 in Mali and 31 in Côte d’Ivoire) who are the agents of cotton companies were trained by the project.

The investigations concerned 5% of farms or 150 farms (5% of the 3,000 farms) in year 1 in Burkina Faso and Mali, 425 farms (out of a total of 18,500) in year 2 in Burkina Faso and Mali, 200 farms including 150 for year 1 and 50 for year 2 in Côte d’Ivoire.
In addition to these baseline surveys, a survey was carried out in 2010 on kits quality and the use.

Regarding the project impact monitoring, on a total of 45 monitoring indicators, 40 have completed, 3 were withdrawn due to lack of data.

In year 1, surveys were conducted on December from 24th to 29th, 2010, at industries level and from 03/01/2011 to 07/02/2011 at producers' level. Surveyors training and surveys implementation in Côte d'Ivoire for the 1st and 2nd year were conducted in November 2011. In Mali and Burkina Faso, trainings were done from 15 to 22/01/2012 and surveys from 15/01/2012.

Inadequacies in the monitoring and evaluation were noticed in Chapter 5.1 relative to the project and its activities management.

**Component 2: Voluntary adoption of techniques by producers**

**Activity 2.1: Equipment identification**

Critical points of the contamination control rely on seed cotton harvest, storage, transportation and handling during the primary marketing. It is with the aim of facing these critical points that the project has availed to producers, a cotton base kit comprising harvest bags, purchase tarp and storage tarp.

The project strategy has been to identify, together with cotton companies, farmer organizations and the spinners, the best harvest equipment at an affordable price (best quality/price ratio).

Kits production has been entrusted to COMATEX (Mali) in 1st 3rd years for the 3 countries, and 2nd year for Côte d'Ivoire and Mali, to “Tapissery Moderne” of Bobo Dioulasso for Burkina Faso in 2nd year.

Upon kits quality problems in 2010 and 2011, the project launched an international tender to identify textile industries capable to produce better quality equipment. It is in this framework that it was asked to CERFITEK to check samples included in different applicants offers. Moreover CERFITEK produced for the project from its small spinner, prototypes of harvest bags (0.80 m x 0.60 m and 0.70 m x 0.60 m) and purchase tarp (1.80 m x 1.80 m and 2 m x 2 m) that were tested with cotton cooperatives/producers groups.

Out of 6 companies that participated in the tender, only three have sent their offers: COMATEX in Mali, “Tapissery Moderne” in Burkina Faso and Meharban companies in Pakistan. The contract was awarded to COMATEX whose price was CFAF 1750 /bag.

The project provided farmers in 3 years:
- 435,000 harvest bags (100% of target);
- 90,000 purchase tarp (100%)
- 40,330 storage tarp (87%)

On the 3,000 storage tarp of the year 3 intended to Côte d'Ivoire, only 500 were delivered making a rate of 16.66%.

The non-respect of the number of tarpaulins intended to Côte d'Ivoire in 2012 has somewhat hampered the successful implementation of activities in this country, given their producers habit to use tarpaulins storage of both cotton in the fields, in the silos on the marketing area. They use very little rack storage for various reasons (lack of wood, ground storing pattern).

**Activity 2.2: Ensure that equipment are manufactured and distributed as planned, and manage their uses**

In 2010, the supplied kit consisted of 7 harvest bags, 2 purchase tarp and one large storage tarp. With regard to this composition, producers made requests that were considered in 2011, with an increase in the number of harvest bags and purchase tarp thus 10 harvest bags, 3 purchase tarp and a storage tarp. Former producers of 2010 received in addition to delivered 7 harvest bags, 3 others to make up their number to 10. They also received 1 purchase tarp of in addition to the 2 delivered in 2010 to complement their number to 3. In addition to farms, each producer group received 10 large storage tarp in 2011. For the detail see table 6 in appendixes.

In 2012: the program projected the same number as in 2011 to new producers (10 harvest bags, 3 purchase tarp and 1 storage tarp) and 5 harvest bags for 2010 and 2011 alumni in addition to the 10 already provided. Producer groups were expected to receive each 10 large storage tarp.
It should be noted that in addition to the insufficient number of kits delivered in 2010, producers’ remarks focused on the quality of these equipment which was not satisfactory: bags were not resistant (163 g/m²), tearing apart even before the end of the harvest period. In addition, they were too long (100 cm x 60 cm) so difficult to handle. Purchase tarps (160 cm x 160 cm) and storage tarpaulins (2.5 m x 3 m) did not resist handling operations. Like bags they had resistance chain of 163 g/m² with a too lean 25 x 20 support.

In addition, the choice of the white color of kits posed a problem of acceptance in the 1st year, in Senufo area in Côte d’Ivoire, because that color is that of the shroud used for the dead. Ivoire Coton mentoring agents sensitization efforts helped to overcome this difficulty.

In 2011, following remarks expressed by producers, harvest bags dimensions have been reduced to 80 cm x 60 cm against 100 cm x 60 cm in 2010 but with the same material 163 g/m². Some producers have yet found these bags too short.

Improving the quality of the kits was felt on the price. Indeed, the price of the bag provided by COMATEX went from CFAF 700/unit in 2010 to CFAF 950 in 2011 and CFAF 1,750 in 2012. The price of the purchase tarps rose from CFAF 1,420/unit in 2010 to CFAF 1,800 in 2011 and CFAF 2,600 in 2012. For storage tarps the price rose from CFAF 3,600/unit in 2010 to 4 350 CFAF in 2011 and 6,600 CFAF in 2012.

These increases result both from the improvement of the material quality (which weight in g/m² rose from 163 g/m² in 2010 and 2011 to 230 g/m² in 2012, the support moved from 25 x 20 to 18 x 20 which is larger, the resistance chain from 616 N to 729 N and resistance frame from 481 N to 540 N) and the acquisition price of the raw material : cotton lint whose purchase price has increased from CFAF 650/kg in 2010 to CFAF 1,800 in 2011, and CFAF 1,400 in 2012. The increase in 2011 kits price is rather the result of the raw material price increase (from CFAF 650 in 2010 to CFAF 1,800 in 2011) than the improvement of the quality of the delivered products.

In addition to kits, the project trained producers in rack storage construction in order to avoid the ground storage of harvested cotton. This activity, although appreciated by all producers is facing problems related to: (i) the lack of wood in some areas, (ii) the investigation of peasants by the forestry services, (iii) the yearly repetition of the construction with the relocation of the cotton field on another parcel due to rotation. Also, in its current form (cutting wood without reforestation), the operation does not preserve the environment; on the contrary, it destroyed without compensation. It was undertaken in 2010, 938 rack storage against a target of 2,700 (or 35%) and 5,623 rack storage in 2011 (5,596 in Mali and 27 in Burkina).
A debate must be conducted on the issue of the construction of wooden rack storage, considering problems related to the wood cutting, especially in the durability of the product. Several solutions can be studied: use of large tarps in cotton, polyethylene or PVC (more expensive), use of removable metal pipes for the construction of rack storage etc.

The rehabilitation of silos which was part of planned activities to preserve the quality of the seed cotton stored in the villages is no longer required from all over the fact that cotton companies of Mali and Burkina Faso prefer the direct evacuation of the cotton towards industries without storage in silos. This action has the advantage to avoid extended storage of seed cotton in the silos system with all the contamination risks involved even if the silo is renovated by producer organizations.

In 2010, 185 silos were renovated especially in Burkina Faso 150 and 35 in Mali against a target of 338 (54.73 %).

Despite the comments made on rack storage construction, and silos renovation, equipment offered by the project are well adapted to the seed cotton contamination control.

Activity 2.3: Make sure that the seed cotton is harvested using preventive measures, and compare the results of the classification to the conventional cotton

The seed cotton and cotton lint production figures are presented as follows:

Table 2; Seed cotton and cotton lint productions in the project areas over the 3 years

<table>
<thead>
<tr>
<th>Pays</th>
<th>Seed cotton and cotton lint Productions (Tons)</th>
<th>2012/13 targets</th>
<th>2011/12</th>
<th>2010/11 recall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seed cotton</td>
<td>Coton lint</td>
<td>Seed cotton</td>
<td>Coton lint</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>41,600</td>
<td>17,472</td>
<td>54,850</td>
<td>23,419</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>33,600</td>
<td>14,700</td>
<td>17,768</td>
<td>7,689</td>
</tr>
<tr>
<td>Mali</td>
<td>51,790</td>
<td>22,160</td>
<td>45,652</td>
<td>18,173</td>
</tr>
<tr>
<td>Total</td>
<td>126,990</td>
<td>54,332</td>
<td>118,270</td>
<td>49,281</td>
</tr>
</tbody>
</table>

On an initial projection of 100,000 tons of seed cotton, the project achieved as soon as the second campaign 143,223 tons of seed cotton (143%) and 59,502 tons of lint. It expects to achieve in 3rd year 127,000 tons of seed cotton and 54,000 tons of lint.

Results obtained in the classification of cotton lint in the project area, compared to non-project area also illustrate the level of achieved progress.
Table 3: Comparison of % of high class based on the cotton industrial grading over the 2 years

<table>
<thead>
<tr>
<th>Pays</th>
<th>Head grade rates</th>
<th>2011/12 Campaign</th>
<th>Recall of 2010/11 Campaign</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Areas</td>
<td>Project</td>
<td>Non project</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>91</td>
<td>83</td>
<td>77</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>61</td>
<td>55</td>
<td>71</td>
</tr>
<tr>
<td>Mali</td>
<td>92</td>
<td>83</td>
<td>88</td>
</tr>
</tbody>
</table>

A significant improvement of the cotton lint quality is noticeable through the rate of head grade in the project area compared to non-project areas. The situation improved in 2011/12 in project and non-project areas compared with 2010/11 in Burkina Faso (91% against 77% in 2010/11 in the project area) and Mali (92% compared to 88% in 2010/11 in the project area), but has deteriorated a little in Côte d’Ivoire (61% compared to 71% in 2010/11 in the project area). However, despite this degradation, it is the area of the project which produced 75% of the head grade of Ivoire Coton since 3 campaigns.

The CCPP, while fighting against seed cotton contamination, allowed to improve the quality of the fiber subsequent to the improvement of production conditions (Training Modules N°1 and 2) harvesting and storage conditions (Training Module N° 3) cotton transport and ginning (module N° 4). The improvement of high class, observed in the project area is the concrete translation of incurred awareness creation and outreach efforts.

The analysis the project area cotton samples compared to those of non-project areas is a way for measuring the impact of used means (awareness creation, training, equipment) on the contamination decline.

Quantification of contaminants in seed cotton and cotton lint samples can contribute to the knowledge of level and type of contamination and to identify appropriate measures for remedy.

It is in this context that in February 2011, the project has signed with the Research and Training Centre for the Textile Industry (CERFITEX) based at Segou in Mali, a contract for the determination of the contamination rate of the seed cotton and lint in the project areas compared to non-project areas. It also compared the rate of cotton contamination at the industry entry and exit (lint). The samples were 1.5 kg of seed cotton collected on each 10 trucks entered in the ginning industry and 0.5 kg of fiber on the same trucks. CERFITEX measures focused on the cotton load (i) vegetal contaminants, (ii) other organic contaminants, (iii) polypropylene and (iv) other inorganic contaminants.

One of the problems faced by CERFITEX was non-homogeneity of samples whose weights did not reach the 1.5 kg of seed cotton and 500 g of fiber (case of Mali).

Cotton companies also are struggling to meet CERFITEX required standards. Out of 1.5 kg of seed cotton sample only 1 kg is analyzed and 100 g out of 500 g of lint. It is desirable that cotton companies equip their factories with reliable electronic scales as is the case in Ivoire Coton and that the CERFITEX revises downward samples weight. CERFITEX must not ask more than the cotton quantity that is strictly necessary for the analysis.

Figure 5: CERFITEX Picture; manual recuperation session of different seed cotton contaminants

- Vegetal contaminants: leaves, branches, cotton and/or other plants shoot.
- Other organic contaminants: dead insects, feathers, papers, jute, cotton wool and fabrics.
- Polypropylene;
- Other inorganic contaminants: sand, dust, metals, divers metal wires, plastics, nylon;
The methodology used by CERFITEX, in order to achieve expected results was the training of sorting agents, the reception and the geographical distribution of the ginneries’ samples, the manual recovery of different contaminants using tweezers and the separation of contaminants from the fiber by the Shirley Analyzer. During this operation, cotton fiber samples were conditioned (samples exposure for 24 hours before their passage to Shirley Analyzer) according to required standards (21°C and 65% of relative moisture). Recovered contaminants have been classified and put into plastic bags by type for their quantification. The weight of each type of contaminant was reported to the total initial weight of seed cotton in order to determine the rate. Collected data have been computed under appropriate software to highlight statistical differences, and results were analyzed and interpreted.

CERFITEX is endowed with high-performance equipment and qualified human resources to carry out cotton samples analyses. It has:
- Four (04) equipped laboratories (Chemistry, textile metrology with a CMI HVI 1000/1000, electricity-electronics-automation and finishing);
- A Regional Technical Centre of cotton Instrumental Ranking (CTRCIC) built in accordance with WAEMU standards and equipped with CMI HVI 1000/700; (CFC/ICAC/33)

The Faculty comprises seven (07) rank A permanent professors and seven (07) technicians.

**Year 1**

In the first year, the average level of contaminants per kg of seed cotton in project area in the three countries was: Burkina 13.72 kg/ton, Côte d’Ivoire 22.96 kg/ton, Mali 6.64 kg/ton. The average amount of contaminants from the project area was 14.44 kg/ton of seed cotton. The share of polypropylene (PP) was 0.0037 g/kg of seed cotton in Burkina, 0.0013 g/kg in Côte d’Ivoire and 0.0023 g/kg in Mali. The analysis, of types of contaminant according to their nature and rate, shows that other inorganic contaminants (sand, dust, metals, diverse metal wires, plastics) represent on average more than half (in weight) of total contaminants of seed cotton collected in project area.

The average amount of contaminants out of project area in Mali was 9.29 kg/ton of seed cotton. The share of polypropylene was 0.0004 g/kg of seed cotton, much lower than that of the PP in the project area in Mali (0.0023 g/kg). The analysis of the contamination of seed cotton outside project area has not conducted for the Côte d’Ivoire and Burkina Faso, by Samples absence in 2010.

For the lint, the calculated average amount of contaminants in the project area in Burkina Faso, Côte d’Ivoire and Mali was 8.57 kg/ton of cotton lint. It ranged from 5 kg to 11 kg in project area. In non-project area it is 6.80 kg/ton of cotton lint and varied from 5 kg to 10 kg.

*We noticed through these results that the level of contamination was higher in project area (8.57 kg/ton) than in non-project area (6.80 kg/ton) and that project impacts on the contamination prevention were not perceptible in the 1st year.*

Even compared to the baseline survey (CFC/ICAC/32 FT), we notes that the levels of contaminants in the seed cotton in project and non-project areas is well above the baseline study for Burkina Faso and Côte d’Ivoire and substantially equal for Mali with regard to its higher value.

The evaluation mission has examined study reports on contamination conducted by CERFITEX for 2010/11 and 2011/12 campaigns. In these reports, CERFITEX, made a comparison between the project results and those of the CFC/ICAC/32FT baseline conducted in Mali between 2006 and 2008.

Comparison of the project results with the baseline brings out two problems: (1) baseline results which concern only Mali, were extrapolated to Côte d’Ivoire and Burkina Faso, both for seed cotton and fiber, (2) the fiber contamination rate of is higher (3.9 to 7.13 kg/ton in total contaminants); despite cleanings performed by ginneries; that the one of seed cotton (3.2 to 6.5 kg/ton of total contaminants), these levels of contamination are:

<table>
<thead>
<tr>
<th>Label</th>
<th>Seed Cotton (kg/ton)</th>
<th>Cotton fiber (kg/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total contaminants</td>
<td>3.2 - 6.5</td>
<td>3.9 – 7.13</td>
</tr>
</tbody>
</table>
### Table 1

<table>
<thead>
<tr>
<th>Material</th>
<th>Organic/vegetal</th>
<th>Inorganic</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.4 - 4.1</td>
<td>0.9 - 2.4</td>
<td>0.001 - 0.07</td>
</tr>
<tr>
<td></td>
<td>3.2 – 6.46</td>
<td>0.2 – 1.76</td>
<td>0.00 - 1.12</td>
</tr>
</tbody>
</table>

How to understand through these results that, with a contamination rate of 6.5 kg/ton of total contaminants for seed cotton, we are left with 7.13 kg/ton of the same contaminants in the fiber? This issue casts doubt on the validity of the baseline study.

**In addition, it will be desirable to control at another level (Laboratory, spinning) contamination rates on 10% of CERFTEX cotton fiber samples.** This is to confirm or refute the results of the CERFTEX and to give greater credibility to these results.

*Based on these results, one can ask many questions about sampling, sample transport conditions and many other items that can greatly affect the results.*

According to CERFTEX, reasons of the side performance in the first year could be explained by the fact that, despite efforts made by the project in the prevention of seed cotton contamination, some weaknesses were identified and highlighted in the first year. These shortcomings were at actors’ awareness creation level as well as the application of certain non-conformities which, according to observations, could lead to the above mentioned results. Among these weaknesses can be highlighted the following facts:

- The transport of a major part of the project samples in the first year was done up to destination in polypropylene bags yet considered a real source of contamination.
- The high amount of polypropylene fiber in cotton in project area proposed in Côte d’Ivoire could be explained by the fact that all samples were taken from a single ball which polypropylene packaging was deteriorated while the sampling was to be made of several cotton balls of the project area.

From these findings, some recommendations were needed to reduce contaminants rates and the following measures were to be observed in 2nd and 3rd year namely:

- Remove foreign bodies from the field, during harvest, storage, transport and ginning.
- Sort cotton in fields (at harvest time), in stores and storage yards,
- Avoid too late harvest which are factors known to increase contaminant in cotton;
- Sensitize, train all those involved in the value chain to improve working methods.
- Use cotton or polyethylene packaging in the entire process instead of polypropylene packaging.
- Apply best practices for cotton ginning etc.

In order to improve results of analyzes in the second and third years, it was decided to:

- Develop a good sampling procedure of seed cotton and fiber
- Harmonize contaminants recovery methods in samples of seed cotton and fiber using the same method of manual sorting with pincers. The supervision of the harmonization has been done by CERFTEX and IER.
- Avoid using polypropylene containers for packaging, transport and storage of samples.

The implementation of these recommendations contributed to the decrease in the level of contamination of seed cotton and fiber in project areas as well as non project areas in the second year.

It was also requested from cotton companies to comply with the requirements of the sampling protocol regarding samples weights.

IFDC is currently reviewing the database for the development of the project completion report, in order to better consider not only means of contamination rates, but also the confidence intervals to determine whether or not significant differences were noticed. In addition, it indicates that the sampling in the first year was not complete, particularly in Côte d’Ivoire during the post-election crisis.

**Year 2**

The analysis of the 2011/12 campaign concerned only the samples from Mali and Côte d’Ivoire. Those of Burkina having not been sent due to problem related to the export of samples of genetically modified cotton. An agreement was reached between the project and the SOFITEX in 2012. It has been hired (for lack of another
structure neutral) to carry out, in its laboratories in Bobo Dioulasso, the analysis required for this cotton. The CERFITEX will take care, as in other countries, in the analysis of conventional cotton of Burkina Faso.

The SOFITEX laboratory for fiber classification whose accreditation is underway in recent years is well equipped and staffed by professionals trained for this purpose. This laboratory is one of the best in Africa. The only drawback to the agreement between the CCPP and SOFITEX, for contamination control of genetically modified cotton samples, is that the latter, although competent to perform analyzes of samples of non contaminated cotton becomes in this case both judge and party. The competence of SOFITEX Laboratory is not at all in concern. In any event, SOFITEX does not seem to be willing to send out of Burkina, samples of genetically modified cotton. The evaluation of samples from Burkina Faso, by SOFITEX, will allow the project to get complete results in terms of analysis. The evaluation team was unable to assess compliance by SOFITEX, to procedures developed by CERFITEX in analyzing contamination, because the protocol between the two parties (SOFITEX and CCPP) was not yet signed during the visit of this mission. IFDC has informed the holdup of CERFITEX analyzes work and thinks there is no reason to imagine that SOFITEX working methods are different from those of CERFITEX; CERFITEX and SOFITEX use the same methods of seed cotton and fiber samples analysis.

Fortunately results obtained in 2011/12 proved the opposite of those of 2010/11. The analysis concerned only the samples of Mali and Côte d'Ivoire. Those of Burkina were not sent for reasons already mentioned.

**Indeed, the level of contamination of the cotton seed in Côte d'Ivoire in project area in 2011/12 was well below that of the 2010/11 campaign (13.20 kg per ton against 22.96 kg/ton making 42%) and higher also than the non-project areas (14.87 kg/ton).**

**In Mali, this level in project area was 6.22 kg/ton against 6.64 kg/ton in 2010/11 or -6% decrease and 9.99 kg/ton in non-project area (37%).**

The average amount of contaminants per ton of fiber in the project area was roughly 4 kg in Côte d'Ivoire and Mali. It is known to note that these two rates are almost identical due to a more efficient cleaning in Côte d'Ivoire despite a highest rate of total contaminants in the seed cotton: 13 kg against 6 kg in Mali.

The average amount of contaminants per ton of fiber in non project area varies from 5 kg in Côte d'Ivoire to 7 kg in Mali. One will notice that in the seed cotton, the average amount of contaminants in the same area ranged from 15 kg in Côte d'Ivoire to 10 kg in Mali per ton of seed cotton.

**Through these results, it appears a significant decrease of the cotton contamination level in 2011/12, decrease resulting from the efforts made by the contamination prevention project. However, the fight is not yet won, because the 4 types of contaminants, particular packaging contaminants mainly the polypropylene, still exist in seed cotton and cotton lint samples in both project and non-project area.**

Packaging contaminants (plastic, hair pieces, paper and cloth strips) and polypropylene exist in both samples of seed cotton that fiber in the two countries (Mali and Côte d'Ivoire) even if quantities are very small. However, we note that in the seed cotton of the project area, the frequency of samples with polypropylene in both countries is lower than that of the non-project area and frequency of samples with polypropylene and packaging contaminants is twice lower in Mali than in Côte d'Ivoire. We must remember that project activities were disrupted in 2011 in Côte d'Ivoire following the crisis it has experienced. All packaging contaminants are feared by spinners especially when they come as fibrous contamination such as polypropylene (PP), hairs, wires and pieces of fabric. Under these conditions, they produce the same effects on finished products. They have always been considered as the most contaminants, thus the use of electronics devices in spinning unit for their systematic detection and elimination from cotton processing process.

**A level of less than one gram of fibrous impurities per ton** of raw cotton would be acceptable by quantity spinners, in order to satisfy their clients and avoid complaints and claims.

Taken as a whole, for this second year of the study, there was a remarkable decline in the level of cotton contamination in all project and non-project areas. This may be due to a positive impact of the Prevention of seed Cotton Contamination Project on the level of cotton contamination. However, significant efforts are still needed to allow African cotton to have a good image. To achieve this would require that all cotton producers in the countries
concerned by the project to correctly apply all recommendations for prevention of the contamination. This is a long-term process that requires constant monitoring and perseverance.

**Component 3: Ginning and marketing of non contaminated lint**

**Activity 3.1:** create awareness and train stakeholders in the lint value chain on the contamination control measures.

The non-contaminated cotton production requires the training of all stakeholders in the value chain, from the producer to the ginner through the transporter. That is why a training program was initiated (4th training module) for ginnery staff including samplers and transporters.

All in all, 240 transporters and 1,269 ginning industry agents (out of target of 750 or 169 %) have been trained on contamination prevention methods. This staff comprise team leaders (shift leaders), ginners, samplers, weighing agents, balls leaders, press leaders, cleaning officers (cleaning of the ginnery and its surrounding environment) etc. The number of agents varies from one ginning industry to another and from one country to another.

*In visited ginneries, the evaluation mission checked the level of knowledge of the agents and transporters with respect to contamination prevention measures and the sampling method of cotton seed and cotton fiber samples. The mission was impressed by the factories cleanliness and the good level of application of given instructions.*

The mission has however noticed in some ginning factories, the marking of cotton uncontaminated balls with the mention “Uncontaminated” (NC) or “Cotton Non Contaminated” (CNC) were not done: M’Bengué and Banfora II case. In the case of M’Bengué, non marking of balls, was an initiative of the officer in charge of this work and not an instruction from Direction of Ivoire Coton. For Banfora II, agents had not received marking instruction from the SOFITEX Direction. In fact, SOFITEX was asking itself the question whether the marking “non contaminated” would not feed the idea that balls would therefore be contaminated. In addition, no one can guarantee the absence of contaminants in a cotton ball.

At SOFITEX, issues relative to traceability of CCPP cotton balls and their specific marking was the subject of reflection between Burkina Faso project coordinator and managers involved in the production of CCPP cotton in Banfora and Orodara on October from 16th to 19th, 2012.

**Activity 3.2:** Ensure that the purity of the project cotton is preserved throughout the fiber production chain and make recommendations.

**How to consider contamination in seed cotton and cotton lint classification?**

The contamination control problem requires a controlled at all levels: in the field, on the marketing area, when loading trucks during their unloading at the ginning factory, when ginning and classifying the fiber.

Cotton contamination control quality handbook developed by ACA and AProCA in addition to the Charter of quality that they have voluntarily adopted, defines the set of actions and rules for the implementation of the action plan against contamination. It's about

- Change the definition of the 1st, 2nd and 3rd choice cotton seed
- Supervise the production and agronomic operations
- Plan and organize the marketing of the seed cotton
- Arrange the purchase, transport and ginning of cotton seed
- Measure contamination on cotton fiber samples at grading service level
- Listen to customers.

The presence of contaminants (especially polypropylene) is now considered in the definitions of 1st, 2nd or 3rd choice cotton. All cotton regardless of its quality (good or bad) must be free from contamination. The application of this measure will be done during the inspection of producers' lots in the village on the seed cotton weighing ground by persons elected for this purpose.

Classifiers will check on each fiber sample, the presence of contaminants and will record in a workbook the nature and the number of foreign bodies. Weight of contaminants or types of contaminant over the weight of the lot of cotton fiber will allow to assess the level of contamination.
When loading the cotton in the trucks, producers must monitor the lots to find contaminants. At the ginning factory, the aspiration time, samples will be drawn to determine the quality of the seed cotton. In case of dispute, reference will be made to the industrial classification.

The control team should first check cotton piles and ensure that the pile does not contain any contaminants. If this is not the case, the producer must sort the cotton and resubmit it to the team.

When loading cotton in the truck, producers must control lots to look for contaminants. At the ginery, at the aspiration time, samples drawing will be made to determine the quality of seed cotton. In case of dispute, reference shall be made to the industrial classification.

In classification rooms, both methods to look for contaminants are recommended: the manual and visual method, and instrumental method.

Classifiers will check on each fiber sample, the presence of contaminants and will record in a workbook the nature and the number of foreign bodies. Weight of contaminants or types of contaminant over the weight of the lot of cotton fiber will assess the level of contamination.

The issue of seed cotton classification is not only a question of method; it is rather a lack of rigor in the application of the method. Indeed, the classification of the seed cotton is the main cause of discord between extension agents or mixed teams of conditioning and producers due to the fact that it is the choice that determines the cotton seed price (1st or 2nd choice) hence producer’s income. It is done in a careless manner in many countries and producers opposed more often to be paid on the basis of the industrial classification. Coercion is not the solution, it must be rather awareness creation and to reward those who accept the rules of the game.

It is for this reason that the payment of a premium to the producer must be understood as the price of an effort by those who accept the rules of the game on the basis of a document “a Charter or a Protocol” which will define the rights, responsibilities and commitments of each party: cotton company and producer organization.

Similarly, awards given annually to the best producer by the cotton companies must, from now, be done on the basis of the quality of the seed-cotton free of contamination rather than on the basis of the lint that is properly cleaned up when the cotton is ginned.

Activity 3.3: Work with cotton companies and traders to promote uncontaminated cotton, do recognize a label and benefit a premium.

Problems related to marketing of non contaminated cotton lint

One of the most important aspects of the contamination control is the sale of the lint to dealers and spinners with the payment of a premium. It is in this context that the project had, with the support of International trade Centre (ITC), organized a visit for Asian traders and spinners (Vietnamese and Bangladeshi) in its operation areas in Burkina Faso and Mali on January from 9th to 14th, 2011. Visitors at the end of their stay had a good appreciation of the efforts made by producers and on the product quality. They committed themselves to buy the product by agreeing to pay a premium to producers. Despite this commitment of visitors, no contract could be signed with cotton companies for reasons of non-compliance to sales procedures (FOB and CAF).

One of the constraints faced by the cotton companies was the presentation of certificates of non contamination to traders, document required by buyers, but that can be provided to them at the risk of heavy penalties in case of discovery of a single contaminant in the sold lot, and it is difficult to find a cotton completely free of contamination. A level of less than one gram of fibrous impurities per ton of raw cotton would be acceptable for spinners, quantity required to satisfy their customers and avoid complaints and claims. With the exception of 200 tons of non contaminated cotton fiber sold 26 FCFA / kg by the CMDT. Other cotton companies in Burkina Faso and Côte d'Ivoire were not able to make transactions, because the main constraint mentioned above.

The weak marketing of the uncontaminated cotton, did not discount payment to project producers. It comes from analysis that all aspects related to the sale of non-contaminated cotton and especially for the payment of a premium to the producer had not properly arrested despite their relevance to the project success. Project overestimated cotton companies’ capacity in the sale of non-contaminated cotton and they relied on a further support of the project in the guarantee of the sale and the mobilization of potential customers.
The planned market study was not carried out for the simple reason that for the project, it is rather about to find a solution to traders and spinners requirements with regard to the non-contamination of cotton than the discovery of a new market.

Pending such solution, CERFITEX could deliver to cotton companies, a certificate of contamination control that they could present to traders to certify the actual level of contamination of the cotton produced in the project area.

Also, the meeting scheduled for January 2013 (but postponed to February 2013), between traders, spinners and business managers of cotton companies will help pave the way for next sale of non-contaminated cotton.

**Setting the premium level to be paid to producers and cotton companies**

In most West and Central African countries, the cotton marketing system does not allow African cotton producers to receive incentives to deliver the quality and characteristics of the fiber that the end-user (i.e. spinning) wants and needs. In addition, the majority of African cotton companies do not have access to market information and futures markets, and as the fiber is sold at FOB position to international traders, they have no direct feedback from end-users on the quality of their fiber.

The establishment of adequate methods and incentives to produce cotton free of impurities will have a double advantage: protect cotton companies and producers from discount prices on the market and allow spinners to maximize the value of their product.

One of the objectives of the CCPP is to establish such a system. Estimates of the level of premium that producers could get in 2012/13 were made based on the prices realized by the CMDT in 2011/12. The price received by CMDT for the sale of 200 tons of non-contaminated cotton was CFAF 26/kg of lint or CFAF 10.40/kg of seed cotton, this level is slightly higher than what CMDT received as a premium in 2011/12 in the sale of the Better Cotton Initiative (BCI) for CFAF 21/kg.

Producers share in this premium would be of CFAF 5.20 based on a fair share (50% each) between producers and the cotton company. Calculations will be made on the basis of CFAF 5/kg. This premium must consider the seed cotton pricing mechanisms in different countries.

**Integrate a premium for the non-contaminated seed cotton production in the seed cotton pricing mechanisms**

To allow the payment of a premium to producers, changes need to be made in the existing mechanisms of the seed cotton pricing. Signatory parties of the mechanism at national level will have to decide these changes. It will be included in the mechanism, a topic relative to a complementary price to pay to producers for the production of non-contaminated cotton.

This topic, which could be called "Premium Non Contaminated Cotton" (BCNC) or otherwise may be subject to a line aside, or taken into account in the subsector common expenses, in the price mechanism of Mali including the formula for the calculation of the producers "final earnings" (RFPCG) is as follows.

\[
\text{RFPCG} = A \times \left([\text{ICWAF} - \text{FOB} - (1-Y)\times Z]\times \text{RDFi} + \text{PVGr} \times \text{RDGr} \times \text{PCOGr} - \text{CHFil}\right)
\]

- **RFPCG** = Final earning of seed cotton producers
- **ICWAF** = Average weighted of COTLOOK index for West Africa reference FOB for 2011/12 harvest over the period of CMDT actual sales from the considered campaign, in CFAF/kg.
- **PAGER** = Fixed seed sale price, in CFAF/kg
- **REFIT** = Average objective lint yield
- **RODGER** = Average objective seed yield
- **PORGY** = market share of seed cotton production
- **Z** = FOB charges
- **Y** = Lint sales share at export
- **CHILL** = Subsector (common) charges
- **A** = Share of subsector earnings for producers

Since the 2010/11 campaign, the sale price of the lint is directly correlated with actual revenues of CMDT. With the exception of seeds sale price of the, the other parameters of the formula are independent of performance, actual production costs of the CMDT.
For the marketing year 2011/12, IPC decided to support certain expenditures of the subsector by itself before any distribution of gross income and introduced a new setting for this purpose in the mechanism. The parameter W, defined as "provisions and prior charges" in the mechanism of February 12th, 2011, was renamed CHFil (subsector charges) in the revised version of March 20th, 2012.

The mechanisms of Burkina Faso and Mali (whose reference is the global cotton prices) are similar in their design.

In Côte d’Ivoire, the cotton sector stakeholders, in agreement with the price mechanism, may decide to include the premium to be paid to producers of non-contaminated cotton or lifting a “mandatory voluntary contribution” (CVO) intended to finance the common costs of the Ivorian cotton sector.

The proposal to pay a premium of CFAF 5/kg to non-contaminated cotton producers is not at all excessive. It corresponds to their share of profit in the sale of non-contaminated cotton. For example it is paid to foundation cotton seed producers in Mali in addition to the official price CFAF 5/kg in order to cover the additional expenses related to the seed production (more fertilizer, more work to be done in the plot).

The premium payment will allow producers to finance the purchase, of kits to ensuring the implementation of the seed cotton contamination prevention activities, on their own resources. Similarly, actors of cotton pricing mechanism in each country may include in the common expenses heading of the cotton sector, additional expenses related to the non contaminated cotton production, ginning and marketing. These charges could relate to the specific costs of supervision, training costs for producers, transporters, extension agents, ginnery agents, cotton samples of analysis costs, etc.

Activity 3.4: Promote and disseminate the project results in the three countries and in the region, defend interests of the farmers who produce quality cotton and work with the cotton sector professionals associations and regional economic communities to promote the need, methods and benefits of non-contaminated seed cotton.

The promotion and dissemination of the project results in the three countries was provided by the main beneficiaries (producers and cotton companies), farmer organizations and their unions, the National Advisory committees (NCC) members whose involvement has helped the establishment of a climate of trust between actors around a common goal: improving the quality and the image of the African cotton. It was one of the most effective elements in stakeholders’ awareness creation and the mobilization around the contamination problems.

The involvement of ACA and AProCA in the project implementation allowed to give more visibility and dynamism to the contamination control at regional level, through the development and signature of the quality Charter and the quality manual of procedures of contamination control.

The International Trade Centre (CCI-CNUCED-OMC) contributed to producers and ginners awareness creation on the negative impact of the contamination on the reputation and the cotton price in West and Central Africa.

The funding, by the World Bank, of a program aiming to change national and regional legislations in order to consider the contamination has been helpful, but its effects on the ground will be visible only through an application and a rigorous monitoring from national and regional organizations.

In fact, manuals of procedures and the Charter were sent on the field to cotton companies, but their implementation is not effective. Cotton companies and farmer organizations should organize to train extension agents, ginnery agents and producers on these documents contents for their dissemination and their large scale application.

6.2. Economic (and social) values of the project results

Cotton plays a central role in the economic and social development of producing regions. In addition to the revenue it provides to producers and companies, cotton brings one more in jobs creation in the ginning and textile industries such as permanent and temporary personnel. Cotton give work to industries spare parts traders and garage, transporters, craftsmen, restaurants, especially during ginning cotton campaigns!

Economic growth in most South Saharan Africa countries remains strongly dependent on cotton production in the agricultural sector. A study commissioned by Oxfam in 2005 in Mali, came to the conclusion that the impact of the application of a producer price of CFAF 160/kg applied in 2005/2006 (drop down of 24% from CFAF 210 previous
year producer prices), should lead to, all things being equal, a decline in producers revenues of CFAF 29.5 billion (U$ 59 million).

For the entire Malian economy the likely loss experienced, after fixation of the cotton seed purchase price at CFAF 160, was estimated at CFAF 62.32 billion (U$ 124.640 million), which would correspond to a 1.86% reduction of the Malian GDP.

Cotton's leading role in the economy of African countries could be wiped out by a drop in income of producers and cotton companies because of the bad image it is victim linked to its contamination by foreign bodies.

In the 3 countries (Burkina Faso, Côte d'Ivoire and Mali) project area producers sell their cotton with a lot of impurities (dust, sand, and stones, pieces of wood and other) that greatly increase the weight of the cotton seed at purchase time and are considered as losses. These losses can reach 4 to5% of the total weight of cotton producing areas

The one percent (1%) reduction of its losses in the 2012/13 campaign, following the implementation of contamination control measures, would make an economy of CFAF 1.521 billion for SOFITEX based on the recovery of 6,210 tons (1%) of losses at a price of CFAF 245/kg (the seed cotton price), CFAF 0.375 billion for Ivoire Coton and 1.226 billion for CMDT Holding for a total of CFAF 3.122 billion (U$ 6.244 million).

In addition, dust, sand and pebbles cause premature wear of ginning parts and require a longer cleaning time, so raise the cost of ginning.

The cotton contamination control allows the producer to better promote its production and to benefit from a good purchase price and a discount on the conventional cotton and a premium on the non-contaminated cotton.

The payment of a CFAF 5/kg premium proposed in activity point 3.3 relative to integration in the cotton seed price setting mechanisms of premium for non-contaminated cotton production, will enable the project 30,000 producers to have an additional income of CFAF 634,950 million based on a production of 126,990 tons in respect of 2012/13 campaign, an average of CFAF 21,165 per producer.

The amount of the premium will be CFAF 208 million for 11,500 producers of SOFITEX making an average of CFAF 18,087 per producer. It will be 168 million for 7,000 producers of Ivoire Cotton or an average of CFAF 24,000 per producer and CFAF 258,950 million for 11,500 producers in CMDT-South or an average of CFAF 22,517 per producer.

The cotton companies will benefit from the same amount as producers (CFAF 634,950 million) based on the equitable sharing of premium which level was CFAF 10.40/kg of seed cotton. The payment of the premium, allow producers to fund themselves the cost of equipment to combat the contamination.

Indeed, the kit price, consisting of 10 harvest bags, 3 purchase tarps a large tarpaulin was CFAF 31,900 (U$ 63.8) on the basis of CFAF 1,750/bag, CFAF 2,600/ purchase tarps and CFAF 6,600/tarpaulin. For the project 30,000 producers the total cost is CFAF 957 million (U$ 1,914 million). The lifespan of the kit is 3 years (according to COMATEX), the annual cost of the kits will be of CFAF 319 million (U$ 638 million).

The annual cost of kits (CFAF 319 million) can be borne by the annual premium (CFAF 634,950 million) with a net margin of CFAF 315,950 million (U$ 631,900). The margin by producer would be CFAF 10,532 (U$ 21).

The implementation of seed cotton contamination prevention activities benefits producers, cotton companies and States through savings in the improvement of the seed cotton and lint quality. A good performance of the cotton companies will allow an increase in the production and an improvement in the growth rate of concerned countries.

6.3. Impact on other factors (if not) like the environment and social.

The project did not have many adverse effects on the environment aside from the construction of wood rack storage without the accompaniment of any reforestation program. The annual renewal of rack storage construction increases the degradation of vegetation cover.

On the other hand, the project activities contribute to the environment protection in the areas of use of biodegradable kits, and the dissemination of messages to producers on the compliance with phytosanitary treatment conditions and standards.
The choice of the white color of kits posed a problem of acceptance in the 1st year, in Senufo area in Côte d’Ivoire, because that color is that of the shroud used for the dead. Ivoire Coton mentoring agents sensitization efforts helped to overcome this difficulty.

6.4. Reach direct and indirect beneficiaries, namely effectiveness project results diffusion

The project allowed a better sensitization of cotton sector stakeholders on the contamination adverse effects, creating in them an awakening of consciousness on the issue. The use of harvesting bags, purchase tarpaulins and received trainings have created among producers and cotton companies agents a behavior change in the cotton harvest, transport, storage and ginning methods as well in the project areas and non-project areas.

The cotton quality has positively evolved in the project intervention areas due to the improvement of the types of head compared to the rest of the cotton zone, evidenced by ginning campaigns balance figures.

The disappearance of the poor quality cotton (2nd and 3rd choice) in farmer organizations in the project area has allowed the re-establishment of confidence between producers and extension agents who have all the time been opposed on the problems of cotton choice.

The project has helped reduce losses related to the cotton storage in fields and in the product conservation in huts through the use of rack storage and tarpaulins. It has contributed to improve farms income through the cotton quality that has generated discount thus causing the poverty decline.

The project impact was felt among producers around those of the project area through the demonstration at their home of manufacture techniques like rack storage and the use of cotton bags in their plots. The Ivorian union AFFICOT-CI has even sought to make cotton kits for non-project producers.

If the project impact is well felt, it remains however crucial to consider the productivity aspect of cotton plots at the level of the project area in order to better secure producers.

Also, the project limited duration, facing the complexity of certain activities did not allow to achieve all expected results, including those related to the uncontaminated cotton lint sale and payment of premium due to cotton producers.

The creation of a network made of producers, cotton companies and traders and spinners as in the case of the Better Cotton Initiative could further reassure traders and spinners who will have the opportunity to see on the field efforts provided in the contamination control because the marketing support is lacking in the marketing for the non-contaminated cotton Label.

6.5. Viability and possibility to reproduce project results

The project based its intervention strategy on the improvement of the existing rather than create new things that are sometimes difficult to be accepted. Offered training modules already existed in cotton companies, but it is their application which was lacking. Similarly used kits were known, but it is their means of acquisition that was lacking. Moreover, kits are locally manufactured, which facilitates their reproduction and adaptation.

The project activities were implemented by cotton companies agents who are on site and available at any time. They were not implemented by staff hired for a determined time period and who would disappear at the end of the project with their knowledge.

The after project has been taken into account since its formulation, through involvement in National Advisory Committees of State representatives, farmers organizations, cotton companies, research structures etc. The establishment of this Committee will sustain actions and expand the project activities to other areas. Similarly, the involvement of regional organizations such as ACA, AProCA, and WAEMU allowed to give regional dimension to contamination control actions, guarantee of its sustainability.

Obstacles to the normal continuation, or even the widespread use of the project activities are: equipment availability (harvest bags, purchase tarpaulins and seed cotton protection tarps), and replacement of current polypropylene (PP) fertilizer bags by polyethylene (PE) bags or setting up a recovery system of old fertilizer bags from producers.
The project generalization at national level and the involvement of all cotton companies in the three countries are strongly desired by all stakeholders. A national day should be organized in each country to secure the framework of mainstreaming and sustainability of the project activities.

This generalization is possible provided that motivate producers and to ensure cotton companies of the action economic profitability.

**Availability of equipment**

The total seed cotton production projection of all cotton companies in the three countries will be 1,442,000 tons in respect of 2012/13 campaign split as follows: Burkina 621,200 tons, Côte d'Ivoire 340,000 tons and Mali 480,800 tons.

The distribution of expected production in 2012/13 in the project area (126,990 tons) on kits gives for 1 harvest bag 423 kg of seed cotton, 1 purchase tarp 1,411 kg of cotton and 1 storage tarp 4,233 kg of cotton.

To control the contamination in the 3 countries (with all the cotton companies), it will take, based on a total seed cotton production of 1,442,000 tons, 3, 409,000 harvesting bags, 1,022,000 purchasing tarps and 341,000 storage tarps.

The coverage of the area will extend over three years with the following projections

<table>
<thead>
<tr>
<th>Table 5: Annual kits needs of the 3 countries</th>
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<tbody>
<tr>
<td>Items</td>
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<tr>
<td>Harvesting bags</td>
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<tr>
<td>Purchasing tarps</td>
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<tr>
<td>Storage tarps</td>
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The quantity of cotton lint needed in kits manufacture is 4,601 tons spread over 3 years making 1,534 tons per year. The amount of fiber was calculated on the basis of 0.65 kg of lint for 1 harvesting bag, 1.4 kg for 1 purchasing tarps and 2.8 kg of fiber for 1 storage tarps.

 Outsourcing harvest bags sewing purchase tarps and storage tarps may be considered, in order to reduce kits acquisition costs and create employment at different countries level through a massive use of local tailors. Indeed, COMATEX recruits and equips professional tailors, and assign them kits cutting and sewing. Outsourcing has requirements that are: the acquisition of large cutting table and electric sewing machines.

Also, in order to still reduce kits acquisition costs, the cotton companies can provide COMATEX with low range cotton as raw material.

The amount required for kits purchase will be CFAF 10,873 billion (U$ 21,747 million) to be split into 3 years making CFAF 3,624 billion (U$ 7,249 million) per year that will be supported by the premium paid to producers for an annual amount of CFAF 7,210 billion (U$ 14,420 million).

**Replacement of current polypropylene (PP) fertilizer bags by the polyethylene (PE)**

The most serious critical point of the seed cotton contamination control is located at the harvest level. Indeed producers use the old fertilizer bags whose edges are frayed to harvest cotton. The cords of the polypropylene bag thus enter the cotton and contaminate it. Farmers acquire easily these bags that deserve them free, since they are paid with the fertilizer.

The contamination control is also replacing current PP fertilizer bags by PE. FILTISAC packaging factory based in Abidjan, which provides bags to most of the fertilizer industries in the Sub region think that the replacement is technically possible even if it has not yet tried it. However, it is left to analyze the cost impact on the fertilizer price.

FILTISAC manufactures current fertilizer bags in polypropylene with the outer face laminated to reduce the risk of fraying. It uses some anti-ultras purple (UV) against bags degradation by the Sun. Warranty is 6 months of continuous exposure (12 hours per day), as it is especially bags exposure to sun that poses most problem. With polyethylene (PE), there is no weaving and its melting point is lower, its melting temperature is lower than that of the dye, which melts when dying and reduces risks to find it in the fabric after dyeing.
FILTISAC produced in recent years PE packaging for cotton Chad cotton seed. These bags are micro perforated to allow a good conservation of the seed.

Fertilizer manufacturers, Toguna Agro industry in Mali and STEPC-Louis DREYFUS Commodities in Côte d'Ivoire, believe that constraints related to the use of PE could be: (i) bags marking (ii) anti UV treatment (iii) welding or sewing and keeping in storage. The fertilizer storage in PE bags would require the use of expensive pallets and reduce storage space therefore, raise the storage cost.

An experiment should be tried on a small scale in order to check the feasibility of the initiative which success is significant in the seed cotton contamination combat.

Also, the purchase of old fertilizer bags from producers to avoid their re-use can also be studied, but this requires good organization and research for funding to carry out the operation.

The generalization of the action to all cotton companies is perfectly possible, but provided you have a full commitment of all stakeholders. The results achieved are still fragile, it should be necessary to consolidate the continuation and intensification of the search of potential customers for the sale of non-contaminated cotton.

The generalization is both a wish expressed by beneficiaries (producers, cotton companies), but also a necessity because the success at the level of a single cotton company or only cotton region cannot guarantee the success of the action. In Ouameilhoro and Lataha cooperatives and the informal grouping of Katiofa in Côte d'Ivoire, producers were keen to generalize the action, because in the same village, they are affiliated with different cotton companies (5-6) and among these companies it was only Ivoire cotton who has trained and equipped its producers, those of other companies become potential risks of contamination in these villages. It is for this reason that they wish the involvement of all the producers in the contamination control to ensure the result.

The development of a new, more ambitious project is therefore necessary in order to consolidate the achievements (the 4 groups of contaminants are still present in cotton samples analyzed by CERFTEX in the project area) and to prepare new areas in the implementation of a pilot project that will put more emphasis on the environment protection and gender.

VII. Lessons learned

• Project Conception
  - The uniqueness of the decision centre creates more than synergy between partners and beneficiaries and improves the project performance.
  - The selection of well structured and experienced cotton companies contributes to results achievement of
  - The involvement of national and regional partners enhances project results dissemination and gives it national and regional dimensions.
  - The involvement of a neutral and experienced structure for the contamination level control allows to check and compare the project results and non-project areas.
  - The non-contaminated cotton lint marketing objectives must consider market requirements. These objectives should have been set based on a preliminary study on market trends.
  - Awareness creation of potential buyers of non contaminated cotton fiber should be a prerequisite in the marketing strategy.
  - Performance indicators relative to the sharing of premiums and the percentage increase incomes of producers and partners cotton companies must consider the non-contaminated cotton lint sale opportunities.
  - The weak involvement of traders/spinners in the project formulation and implementation. The involvement of these partners would have the advantage of minimizing marketing problems faced in the sale of the non-contaminated cotton fiber.

• Project Evaluation
  
The final evaluation of the project must consider all results of the third campaign especially those relative to the project state and impact survey, ginning, contamination level control, and the sale of the non-contaminated fiber.

• Aspects relative to the implementation/operations
- The availability of funds allows activities implementation and the compliance of the developed schedule.
- States willingness to re-launch cotton production in the three countries has contributed to results achievement.
- Good behavior of world cotton prices, the payment to producer of high cotton purchase price and discount contribute to their motivation and to objectives achievement.
- The free provision of appropriate equipment and producers, extension agents, industry agents and transporters training easier activities implementation and the achievement of results.
- Payment of perdiems to producers and cotton companies agents create more motivation and contribute to the achievement of results.
- The choice of products used in the prevention of the seed cotton contamination must consider requirements of partners cotton companies (such as repair of silos)

**Sustainable Character**
- Equipment (Kits) must be sustainable materials (3 to 5 years) and acquired at affordable prices
- The selection of products used in the seed cotton contamination prevention must take into account the environment protection (case of flakes)
- Equipment prices sharing must be considered since the project beginning to prepare producers to the after project conditions.
- All producers of concerned countries must be in the process to ensure the non contamination of cotton at a national level.

**VIII. Recommendations**

The following recommendations are made to correct deficiencies in the project implementation and the application of measures taken by the ACA and AProCA in the fight against contamination and allow African cotton sustainability of project activities and their generalization to all companies and all cotton producers in the three countries concerned.

Regarding the project implementation, identified short comes are related to:
- Lack of harmonization of data between accounting monitoring documents, as well as budget outlines and per diems paid to beneficiaries of various countries,
- The update of log frame in relation with project impact monitoring documents
- Non-compliance sampling standards by cotton companies,
- Low level of contamination control
- Nonpayment of premium to producers and cotton companies.

About the sustainability of project activities, there is a need to take measures for the implementation of recommendations from the ACA and AProCA and the organization of a national reflection day in each country in order to establish the institutional framework and the generalization and sustainability of project activities.

The following recommendations are formulated by actors in order to correct deficiencies and propose guidelines for the sustainability of project activities.

**Project Implementation**

**IFDC**
- Harmonize data between accounting monitoring documents, as well as budget outlines and per diems paid to the beneficiaries of various countries.
- Update the logframe in relation with project impact monitoring documents

**CERFITEX**
- Check the contamination rates at another level (Lab, spinning) on 10% of cotton fiber samples from CERFITEX
- Deliver to cotton companies, a certificate of contamination control that they could present to traders to certify the actual level of contamination of the cotton produced in the project area.

**Cotton companies**
- Equip ginneries with simple scales in view of compliance to sampling standards
- Continue the research of potential clients for the sale of non contaminated cotton fiber.

**Generalization and sustainability of project activities**

**Government**
- Change legislation to take into account the contamination in the quality control and cotton pricing,
- Include, in the cotton pricing mechanisms, the premium payments from non contaminated cotton sale
- Organizing a national day of reflection in each country in order to establish the institutional framework of the generalization and sustainability of project activities.

**Cotton companies and producer organizations**
- The implementation of the action plan against contamination and costs and benefits sharing,
- The inclusion of clean cotton kits in the standard package and their costs sharing (50/50), the sharing of eventual premiums/ gains received from non contaminated cotton sale
- The application of the contamination in the quality control system of seed cotton and fiber,
- Control of the contamination in the fiber samples in grading centers in each country
- Implementation of training programs for actors of the cotton value chain (producers, extension agents, purchase agents, ginners) based on the contents of the manual of procedures
- Appeal ACA and AProCA for a support in order to consolidate achievements and prepare new areas,
- Create a network made of producers, cotton companies, traders and spinners; in order to further reassure traders and spinners who will be able to see in the field efforts in the fight against contamination; as the marketing support has been lacking in the marketing for the non-contaminated cotton label.

The implementation of the above recommendations will allow the cotton companies to meet sampling standards set by CERFTEX to obtain more reliable contamination rates and results to that worth efforts provided by producers and cotton companies.

The control, of part (10%) of cotton fiber samples from CERFTEX; by another structure (Laboratory, Spinning) aims to confirm or refute CERFTEX results and give them more credibility.

Premium payments to producers and cotton companies being one of the project goals to sustain the contamination prevention activities; the success of cotton companies in the sale of non contaminated cotton fiber remains a priority.

The implementation of the action plan, and the application of quality charter and manual of procedures as developed and adopted by ACA and AProCA to allow changes in legislation at national and regional levels, to consider the contamination in the quality control and costs and benefits associated with them in national cotton pricing mechanisms; will undoubtedly allow to lay foundations for sustainability and mainstreaming of project activities.

Also a support (technical, financial) from ACA/AProCA is still needed to help producers and cotton companies in the implementation of the ACA/AProCA action plan and allow rapid generalization of project activities.

**IX Conclusion**

The seed Cotton Contamination Prevention Project (CCPP) in West Africa, implemented in 3 countries: Burkina Faso, Côte d’Ivoire and Mali by the International Fertilizer Development Centre (IFDC) under the control of the International Cotton Advisory Committee (ICAC) fits in a straight line with national and regional direction in the cotton quality improvement, contamination control and improvement of producers income. Information, awareness creation training and kits distribution activities were achieved by extension workers of cotton companies.

IFDC’s experience in managing development projects, its good relations with the cotton companies, producer organizations, agricultural research ministerial departments in charge and crop input suppliers in its intervention areas helped to overcome many difficulties to reach set objectives.
The involvement of ACA and AProCA in the project implementation has given more visibility and momentum to the fight against contamination at the regional level, through the development and signing of the quality charter and quality Manual of procedures for contamination control.

The funding, by the World Bank, of a program aiming to change national and regional legislations in order to consider the contamination has been helpful, but its effects on the ground will be visible only through an application and a rigorous monitoring from national and regional organizations.

The International Trade Centre (CCI-CNUCED-OMC) contributed to producers and ginners awareness creation on the negative impact of the contamination on the reputation and the cotton price in West and Central Africa.

The project has achieved its objectives in mentoring, equipment and producers, cotton companies agents (extension workers and industry agents) and transporters training: 30,000 against a projection of 27,000 (111%) have been involved at the end of the 3 years. The project achieved in the first and second year, a cumulative rate of 77% in project area) and Mali (92% against 88% in project area), but has been disrupted a little in Côte d’Ivoire (61% against 71% in project area). However, despite this degradation, it is the project area which produced 75% of the head grade of Ivoire cotton since 3 campaigns.

A significant improvement of the cotton lint quality is manifest through the high grade rate in the project area compared to non-project areas. This rate improved in 2011/12 in the project area and non-project compared with 2010/11 in Burkina Faso (91% against 77% in project area) and Mali (92% against 88% in project area), but has deteriorated a little in Côte d’Ivoire (61% against 71% in project area). However, despite this degradation, it is the project area which produced 75% of the head grade of Ivoire cotton since 3 campaigns.

The control of the contamination level gave sundry results in the first year, but satisfactory in the second year with an overall of contamination rate in the project area lower than that of non-project areas for both seed cotton and lint. Indeed, the levels of contamination of the seed cotton in Côte d’Ivoire in project area in 2011/12 has been far below that of the 2010/11 campaign (13.20 kg per ton against 22.96 kg/ton i.e.42%) and also lower than the non-project areas (14.87 kg/ton).

In Mali, this level in a project area was 6.22 kg/ton against 6.64 kg/ton in 2010/11 making a decrease of -6% and against 9.99 kg/ton in non-project area (-37%). The analysis of Burkina Faso samples was not done in the second year because of problems related to the exit out of country of the genetically modified cotton.

Through these results, it appears a significant decrease of the level of contamination of the cotton in 2011/12, decrease resulting from the efforts made by the project for the contamination prevention. However, the fight is not yet won, because the 4 types of contaminants, particularly packaging contaminants and mainly the polypropylene still exist in seed cotton and cotton lint samples in project and non-project areas.

The frequency of samples with polypropylene in both countries (Mali and Côte d’Ivoire) is lower than that of the non-project area and frequency of samples with polypropylene and packaging contaminants is twice lower in Mali than in Côte d’Ivoire. We must remember that project activities were disrupted in 2011 in Côte d’Ivoire following the crisis it has experienced.

Taken as a whole, for this second year of the project, there was a remarkable decline in the level of cotton contamination in all project and non-project areas. This may be due to a positive impact of the Prevention of seed Cotton Contamination Project on the level of cotton contamination. However, significant efforts are still needed to allow African cotton to have a good image. To achieve this would require that all cotton producers in the countries concerned by the project to correctly apply all recommendations for prevention of the contamination. This is a long-term process that requires constant monitoring and perseverance.

Cotton companies have faced difficulties for the sale of non-contaminated cotton lint. Only 200 tons could be sold by the CMDT in 2011/12, with a premium CFAF 26/kg. The non-sale of the lint did not allow the sharing of premium between producers and cotton companies.

One of the constraints faced by the cotton companies was the presentation of certificates of non contamination to traders, document required by buyers, but that can be provided to them at the risk of heavy penalties in case of discovery of a single contaminant in the sold lot, and it is difficult to find a cotton completely free of contamination.

Effort needs to be made in regard to lint marketing and producers motivation for a generalization of seed cotton contamination-prevention activities to all cotton producers in concerned countries.
The strong involvement of the National Advisory Committees, ACA and AProCA and the determination of cotton companies and producer organizations to continue the fight against the contamination of seed cotton is a strong signal for the sustainability of project activities.

The seed Cotton Contamination Prevention Project in West African (CCPP) has achieved its objectives in terms of awareness creation, training of producers, transporters, extension and ginning industry agents. It has achieved and even exceeded its objectives of seed cotton and cotton fiber production. The quality of the non-contaminated cotton produced has much improved and the contamination rate has declined in the second year in the project areas compared to non-project areas and compared to the first year. However efforts remain to provide for improve or preserve its achievements and to extend the experience to all cotton producers of concerned countries in order to perpetuate the action.