

AID-FOR-TRADE: CASE STORY

EUROPEAN UNION

Support to the Agriculture Sector in Rwanda (2003-2010)

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EXECUTIVE SUMMARY

This € 24 million Programme executed by the Rwandan government with support from the European Union aims at assisting the government of Rwanda in implementing its policies, notably in the agricultural sector. Its specific objectives are oriented towards the following components: Coffee, Privatization of Tea and Pyrethrum, Diversification and Decentralization, and mixes several types of assistance including technical assistance, infrastructures and capacity building.

The impact of the Programme is very tangible and considerable positive changes have occurred between 1999 and 2009 in the agricultural sector in general and notably in areas such as coffee investments, tea privatization, introduction of new technological innovations, and reinforcement of decentralization process. The programme has globally contributed to stimulating market-oriented agriculture and local initiatives and accompanying the privatization process to ensure added-value exports. It has contributed to a 38,2% share in total export value (real terms) for coffee and tea together in 2009 and to increasing the share of fully washed coffee from zero to 24% in 2009. The most significant change for the tea sector is the productivity increase in leaves per hectare, from 5.7 MT to 7 MT.

The Programme has a social impact in terms of improvement in livelihood, reinforcement of cooperatives, increase of purchase power, technical capacity building, reinforcement of negotiation capacity, women's empowerment, and reconciliation. In general activities involve at least 30% to 40% of women. The closer cooperation between all members of the communities contributes to the reconciliation process. The number of direct beneficiaries reaches a total of about 60.000 recipient farmers, and some 40 institutional staff. There is also a positive impact on environment, e.g. through the drainage, the limitation of erosion on terraces, water recycling in the Washing Stations, and better use of chemicals.

ISSUES ADDRESSED

The programme is a continuation of the EU-Rwanda cooperation aiming at assisting the government in the implementation of its policies, notably in the agricultural sector, in which about 85% of the population is still working. After the genocide of 1994, agricultural output of major sectors of Rwanda's export crops (tea,

coffee and pyrethrum) declined dramatically affecting the export and producer incomes.

The strategy of the programme for **tea and pyrethrum** was designed at the early stage of the identification process to accompany the on-going privatisation process in those sectors and to increase their productivity and export capacities. When the programme was established, the situation of the different value chains, coffee, tea, and pyrethrum, was in decline, but their restructuring and liberalization was already initiated. The Programme supported the privatisation to reduce post harvest losses and declining yields, as well as to attract needed private investment for developing the Rwandan industries, to attract higher management skills and new technologies to enhance production, and to increase job opportunities in the rural sector.

The main constraints in the **Coffee** value chain were at that time the weak level of fertilization, the low disease control, the number of non performing varieties, and particularly aging plantations. From the post harvest side, techniques were not adjusted to the market constraints, because in Rwanda most of the coffee was sold as semi washed and the number of Washing Stations was insufficient.

Rwanda has traditionally suffered from a scarcity of land and high population pressure. This pressure is compounded by the erosion phenomena due to the steady increase in land use and, more recently, badly affected by the climate changes (punctual heavy rains). This had negative impacts on the slopes and sometimes marshes below, and hindered the development of agricultural production.

There was also a need to create and develop new opportunities in the rural areas in terms of production, transformation and marketing, based on local initiatives. The country featured many potentially good entrepreneurs and potential added value for non-crop and diversified agricultural products, which could be better capitalised upon. This would also contribute to the **decentralization process** that was also introduced by the Government so as to increase the participatory decision process at community level, eradicate poverty, and improve the transparency.

OBJECTIVES PURSUED

The programme has been built around 5 major components of which three target specific value chains (coffee, tea, and pyrethrum) and two are more cross-cutting development programmes (diversification, environment protection and decentralization). The program covered the whole country and the activities were conducted in a lot of different places (10 tea estates, thousands of coffee plantations, 40 radical terracing sites, etc).

Budget COM STABEX

Budget COM €	Re-allocation	% of SP/ Total
1 – Value Chains	19.324.231	81%
2 – Development	4.200.791	18%
3 – Others	308.911	1%
TOTAL	23.833.933	100%

Value Chains

Coffee sub-programme

- Improvement of the production qualitatively and quantitatively through support to OCIR Café¹, the Rwandan Coffee Development authority in charge of supporting coffee production and exports. This included support to production and cooperatives (including Washing Stations), and marketing support through international exhibitions.
- Production of Vitroplants through ISAR², the Rwanda Agricultural Research Institute which was selected to implement a laboratory and greenhouses for production of coffee vitroplants (infrastructure, equipment and operation costs).

Tea and pyrethrum flower sub-programme

- The objective of the **Tea** component is to support the full sector privatization, the increase of the production qualitatively and quantitatively, the increase of yields and the increase of black tea export revenues. The OCIR THÉ, the Rwandan Tea authority in charge of supporting tea production and exports operating under the MINAGRI³, was selected as implementing body.
- For the **pyrethrum flowers**, the objective is also the full sector privatization, the increase of the production in extension areas (150 ha), as well as the increase quantity of final export extracted product and in purchase price of flowers. RHODA, the Rwanda Horticulture Development Authority (also under the MINAGRI) is the implementing body.

Development Programmes

Diversification sub-programme

- The installation of **bench terraces**, to improve population incomes through high labour intensity works and intensification of the agriculture, to improve food security through the increase of agricultural production, and to protect risk areas from erosion. The coordination of the project was ensured by RADA, Rwanda Agricultural Development Authority.
- The support to **diversification projects** such as: fish farming, bee-keeping, soja, essential oils, etc, was directly managed by Ministry of Finances and MINAGRI under control of the European Union Delegation.

Decentralization sub-programme

- Support to the National plan of Poverty Reduction (PNRP) through a pilot project called UBUDEHE: a Rwandan system of intra-community co-operation based on collective and individual actions.
- Support to the Social Infrastructures programme.

DESIGN AND IMPLEMENTATION

The Stabex programme was designed accordingly to the main strategies set up by the government in the decentralisation and agriculture frameworks. In 2000, the Government launched a National Decentralisation

¹ Office des cultures industrielles du Rwanda Café

² Institute des Sciences Agronomiques du Rwanda

³ Ministry of Agriculture and Animal Resources

Policy with the aim of strengthening the practice of good governance and promoting the mobilisation and participation of the people in determining their own well-being. Specifically in the domain of agriculture, a National Agricultural Policy (NAP) was developed in 2004 and translated into an operational plan through the SPAT, covering the period 2005-2008. The SPAT was elaborated following an extensive grassroots consultation process and sound thematic sub-sector analyses. The NAP and the SPAT are in line with the global development objectives spelled out in Vision 2020 regarding a market-led agricultural development whereby farmers are seen as entrepreneurs, while the role of the State is one of creating and maintaining an enabling environment for the private sector and producers to play their respective roles.

The implementation of all activities has been done through the establishment of more than 27 Work Plans, involving various agencies in intervention sectors (MINAGRI, MINICOM⁴, OCIR Coffee & Tea, RADA, RHODA, ISAR, etc). The programme Coordination Cell played the role of interface between the recipients and the EU Delegation.

The implementation of the Programme effectively started in March 2003, especially oriented on coffee and privatisation during the first stage. A serial of addenda often resulted in delays in implementation. Therefore, the strategy of intervention was revised in 2007 and resulted in the successful dispatch of the unused funds to support the decentralization and diversification components. The revision of the Strategy has put more emphasis on the food crops and the way to diversify the revenues of the farmers (according to the revision of the agriculture sectoral policy which was designed in 2007).

PROBLEMS ENCOUNTERED

There was a slow progress at the very early implementation stages. Some difficulties delayed the implementation of the Programme like the weakness of enterprises, the limited capacity of cooperatives and the lack of mentoring. Because of this, the Programme actually started two years after the signature, and has been object of a serial of addenda. During the last years of the program, its implementation and disbursement rates increased significantly due to the better involvement of the different institutional bodies, including frequent coordination meetings and field visits.

Furthermore, the lack of strategic planning, high management staff turnover and lack of monitoring of the implementing institutions reduced the implementability of some foreseen actions, in particular those involving complex tender procedures and close follow up of the contractors. It was particularly the case of the building contracts, which were frequently strongly delayed or cancelled, due to the lack of follow up and/or reactivity by the supervising authorities. Most of the involved institutions have weaknesses in designing their strategy, coordinating with other institutions, monitoring the activities and consolidating information and reporting.

Merging a set of rather different types of components within one single programme was a challenge. That is why the different stakeholders had to re-formulate their own intervention logic. At the conception stage, the programme was described along a large list of activities, divided by interventions sector. Therefore, each subprogramme had to formulate its own intervention logic after starting the implementation. There is actually no logical framework for the Programme as such. However, it presents a description of the intervention logic, specifying the activities to be undertaken, expected outcomes of actions, the specific objective and overall goal.

⁴ Ministry of Industry and Trade

FACTORS FOR SUCCESS / FAILURE

The Programme strategy is globally relevant and in line with the Rwanda Economic Development and Poverty Reduction Strategy EDPRS - 2008-2012 and the Second Strategic Plan for the Transformation of Agriculture (SPTA II).

The decentralization process financed by the Programme supported the National plan of Poverty Reduction (PNRP) through a pilot project called UBUDEHE. The pilot Ubudehe project in the Butare province was a learning phase for a decentralized planning process. The essence of the methodology of Ubudehe was that the principal beneficiaries (those living below the poverty threshold) participate in prioritising rural development in their locality and in implementing micro projects related to those priorities. Experience gained in previous Rwandan decentralisation programmes financed by the EU and others had actually justified the approach of working in a participative way with the beneficiaries.

This pilot phase has further scaled up at national level and was very successful (it won in 2009 the prestigious UN award for the good governance) and it generated important social impacts.

Another factor of success was the ability to be flexible and adjust the programme components to the challenges described earlier. The programme was able to transfer funds from one component to other, in accordance with the performance of the various activities.

Some activities could have delivered better results. Insufficient management capacity building is one factor that has contributed to this, as well as weaknesses in monitoring and reporting. During the last years of the program, its implementation and disbursement rates increased significantly due to the better involvement of the different institutional bodies, including frequent coordination meetings and field visits.

RESULTS ACHIEVED

The programme has achieved positive social impact in terms of improvement in livelihood, strengthening of cooperatives, increase of purchase power, technical capacity building, reinforcement of negotiation capacity, women empowerment, and reconciliation. Most of the projects were cost efficient and the number of direct beneficiaries raises a total of about 60.000 recipient farmers, and some 40 institutional staff.

The Programme has significantly contributed **to re-launch the coffee production** in Rwanda. OCIR CAFÉ has been able to implement the government strategies. The main physical achievements for the coffee component are 5 new Washing Stations, new equipment to 37 private Washing Stations (including 22 Cooperatives), 11 storage facilities and 80 rehabilitated "Centres de Dépulpage Manuel". In order to increase the production, a large volume of insecticides, fungicides and manure have been provided to farmers free of charge. Currently, a national subsidy program is set up by the government to buy the agriculture inputs. Moreover, a new variety has been multiplied due to its more resistant and high productive characteristics. The project also multiplied the Themeda as cover plant, on 60 ha, and installed a GIS system at OCIR CAFÉ and co-financed a Coffee census (with USAID – 2009). The marketing support was essentially concentrated in capacity building of key OCIR and Cooperative staff. The ISAR activities include one laboratory and two nurseries, as well as additional works, and other investments. To date about 32.000 plants have been produced of which 3.500 in nurseries.

The **Tea privatization process** started in 2003 and 8 estates have been privatized so far. Only two are yet not privatized because of the lack of an industrial block, which is a weakness for the potential private investments. As part of the privatization process, the **demarcation** of plot boundaries and mapping was undertaken and 2.180 ha of demarcation have been achieved. Concerning the **Drainage canals**, in total 451 kms of secondary drains have been built and 2.961 kms have been rehabilitated for the 7 estates. The **road**

works on 10 estates included also bridges especially in Mulindi estate. The overall tasks have been implemented: 138 Km of access roads, 36 bridges and other 439 road works. A total of 148 barns/collecting centres have been built or rehabilitated, and 8 cooperatives offices rehabilitated, with a generally good quality of construction. During the programme **training** has been delivered to OCIR THE staff, cooperatives and Tea Makers.

For the **Pyrethrum flowers** privatization process, the programme did **extend** production on 49 ha in 4 districts, 110 ha of existing land had been prepared for more effective production and organic fertilizers provided to farmers. Pyrethrum **dryers** have been installed. **Training** on cultivation methods and disease control for delegate farmers and project executives have been carried out.

Concerning the different value chains, the Programme has a very tangible impact. It has gradually promoted Rwanda's coffee in international markets with higher standards, and higher possibility to negotiate with buyers. For instance, now Washing Stations are able to negotiate between 4.5 and 7 USD per kilo of high quality green coffee. It has also contributed to a 38,2% share in total export value (real terms) for coffee and tea together in 2009. The share of fully washed coffee increased from zero in 2003 to 24% in 2009. For the Tea sector, the production of green leaves evolved from 67 000 MT to 87 000 MT, but the most significant change is the productivity increase in leaves per hectare, from 5.7 MT to 7 MT. The implementation of the new refinery allowed SOPYRWA, a Private Pyrethrum Processing Company, to increase significantly pyrethrum farm-gate prices for dry flowers to about 2 US\$.

For the **bench Terraces**, achievements are very good and with a very good quality. The programme enabled the building of terrasses have on 1.728 ha, in 6 districts. District and sector agronomist have received technical training to follow up the activities. For the **Diversification projects**, a call for proposals was launched in 2008 and 16 proposals (out of 120) were awarded in the following sectors: Fish culture, Dairy goat, Ikambere Dairy, Potatoes, Honey Nyungwe, Soya, Mushrooms, Macadamia, Sericulture, Terraces, Essential oils).

As for the **Decentralization** component, the programme financed a pilot project called UBUDEHE that has generated important social impacts helping the cells in the formulation of their action plans and financing the realization of priority micro projects mainly targeted on agriculture and breeding.

Some difficulties were quoted for UBUDEHE, however, the efficiency of the projects has finally been largely positive for the beneficiaries. Besides, a training manual was elaborated as well as a booklet entitled "Ubudehe Approach" to facilitate the training phase at the level of the cells. In total 224 persons were trained in districts of 6 provinces. Communities in general had a good knowledge of the UBUDEHE process and a very positive appreciation.

This component included- **support to Microprojets**. After identification of priority actions and financial support, more than 550 activities have been implemented in various fields: agriculture, breeding, fish-culture, timbering, small shops, housing constructions of roads and bridges, credit funds, purchase of vehicles, and support to co-operatives. There was a good appropriation by the communities, with a catalytic effect with the possibility of redistributing this "block grant" to other members of the cell. The final evaluation of the Ubudehe programme has shown its high relevance towards beneficiaries' needs and at least 20% of the population of Rwanda has benefited from the programme if including potential indirect beneficiaries into the scope. In so far, the programme was considered as a great success. Ubudehe can be sustainable on a long term basis, but it depends on the community organization and management capacity.

Some weaknesses are visible in terms of Washing Stations (WS) selection process and WS processing optimization, vision for dissemination of vitroplants, and the design of pyrethrum-related activities.

LESSONS LEARNED

Overall, the programme has obtained good results. Following the privatization process, institutions will have to redirect their role in favour of a more strategic way, including, policy design, planning, monitoring, impact studies.

The lack of strategic planning, high management staff turnover and the weakness of monitoring of the implementing institutions made some actions more difficult to deliver. With more strategic approaches and appropriate monitoring, the Programme could have gained an even higher degree of effectiveness.

For export commodities the potential viability should be related to quality products, focussing on niche markets, instead of quantitative targets, as it is the case now for the tea production.

The pilot Ubudehe project in the Butare province provides guidance on how to best work in a participative way with the beneficiaries. In June 2003, two evaluations provided positive feedback suggesting principally that funds spent at Cells level should essentially fund collective actions. Subsequently, the EU funded two further phases of the Ubudehe programme (2005-2006 and 2007-2008) rolled out nationwide through the Decentralized Programme for Rural Poverty Reduction (DPRPR - 9th EDF), in addition to the "Support to the Districts" programme (Programme d'Appui aux Districts / PAD). The final evaluation of the Ubudehe programme has shown its high relevance towards beneficiaries' needs as well as its consistency with the different Poverty Reduction Strategy Papers and the reform initiatives being undertaken by the government of Rwanda.

CONCLUSION

Whilst bringing together a rather wide range of activities which are not directly linked to one another, the Programme has globally contributed stimulating market-oriented agriculture and local initiatives and accompanying the privatization process to ensure added-value exports. Physical achievements for coffee, tea, diversification, and decentralization are substantial as aforementioned.

Different components such as decentralization, bench terraces, tea rural roads, etc have paved the way to the current implementation of the 10th EDF funds via sectoral budget support: a 20M€ SBS project about decentralized agriculture, providing direct earmarked funds to the districts is ongoing; another 20M€ SBS project for social protection inspired by Ubudehe will be soon signed; in addition a 20M€ SBS project dedicated to the feeder roads is under preparation. In Rwanda, the major donors are currently designing their own support, in particular in the framework of budget support modalities, by taking into account the lessons learnt by EU in these fields (agriculture and decentralization).

ANNEXES / REFERENCES

- 1- Impact evaluation and ecofin analysis final report
- 2- Final evaluation report

DELEGATION OF THE EUROPEAN COMMISSION IN RWANDA



“Evaluation, étude d’impact et analyse Ecofin du Programme de terrassement radical Rwanda COM STABEX 96-99”

Contract n° 2009/225794/1

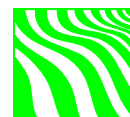
FWC BENEFICIARIES 2009 - LOT N° 1

Final report

August 2010



LOT 1
Multiple Framework Contract –
Rural Development



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DELEGATION of the EUROPEAN COMMISSION

Rwanda

**“Evaluation, étude d’impact et analyse Ecofin du Programme de
terrassement radical Rwanda COM STABEX 96-99”**

**Contract N° 2009/225794/1
Framework Contract Beneficiaries – Lot 1**

August 2010 ¹

**b
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¹ This version, based on June 2010 final version, includes comments received in August 2010 from RADA team.

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Acronym definition

CAADP	Comprehensive African Agriculture Development Program
CBR	Community Based Reintegration
CGIAR	Consultative Group on International Agricultural Research
CIP	Crop Intensification Program
COM	Cadre d'Obligations Mutuelles
COMESA	Common Market of Eastern and Southern Africa
DPCG	Development Partners Coordination Group
EAC	East African Community
EDPRS	Economic Development and Poverty Reduction Strategy
GoR	Government of Rwanda
HIMO	Haute Intensité de Main d'œuvre / Labour Intensive Works
ISAR	Institut des Sciences Agronomiques du Rwanda
KfW	Banque de développement Allemande
MDGs	Millennium Development Goals
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government, Good Governance, Rural Development and Social Affairs
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education and Scientific Research
MINICOM	Ministry of Industry and Trade
MININFRA	Ministry of Infrastructure
MINISANTE	Ministry of Health
MINITERE	Ministry of Lands, Environment, Forestry, Water and Mines
NEPAD	New Partnership for Africa's Development
NPK	Nitrogen, Phosphat, Potassium units
OCIR	Office Rwandais de Promotion du Cafe (ocir cafe)
OSTR	Opérateur spécialisé en terrasses radicales
PAREF	Programme d'Appui à la Reforestation au Rwanda
PIM	Project Implementation Manual
PSTA	Strategic Plan for the Transformation of Agriculture in Rwanda
RADA	Rwanda Agricultural Development Authority
RDRC	Rwanda Demobilisation and Reintegration Commission
REC	Regional Economic Community
RHODA	Rwanda Horticulture Development Authority
RWF	Rwanda currency – Francs Rwandais
SADC	Southern African Development Community
SOPRYRWA	Societe de Pyrethre au Rwanda
STABEX	Système de Stabilisation des Recettes d'Exportation
SWAp	Sector Wide Approach
TIG	Travaux d'intérêt général / Community works

Table 1: Acronyms

1 Executive summary

Under the STABEX COM signed in 2001, revised in 2006, EUR 3.7 million have been allocated to a bench terracing programme, from support to decentralisation and diversification sub-programme budget lines.

The bench terracing programme covers six districts, in which population amounts 1,650,000 persons, the project area covers 417,500 hectares.

The project aims to build around 1,800 hectares of bench terraces on cultivated lands (high slopes) to **fight against erosion**, to **increase agricultural production and productivity**, to **improve population incomes** by high labour intensity works and agricultural intensification, to **improve food security**.

The project is implemented according to the decentralisation policy, through district level cost estimates (French: devis – programmes). RADA is in charge of the overall management.

All procurements are managed by the districts, with respect of the national tendering procedures. Works are managed by the way of service contracts with specialized private operators [OSTR]. The labour force is recruited by the district, managed by the operators.

1.1 Relevance

Relevance to national policies (including districts' development plans) and EU policy is absolute.

As regards to the environment topics, a wider approach would be required, taking the whole catchment area in consideration. A set of erosion mitigation corrective techniques has to be deployed, in conjunction with conservative agricultural practices.

Relevance to beneficiaries should be monitored in the coming months / years : increase of production and productivity, increase of agricultural revenue are not solely linked to the change of the landscape and accompanying measures have to be put in place by the Ministry of Agriculture to complete such goals.

1.2 Effectiveness

Objectives are on two domains :

- Erosion mitigation, erosion tamed.

- Agricultural productivity / production increased

A third domain can be added : increase of population income, either with direct income and long term improved revenues

As regard to erosion control, the problem has to be dealt with at the whole watershed level. As regard to agricultural productivity, relying on chemical fertilisers will give a instant increase (on the expense of soil quality deterioration) but will have to be supported in the long run by accompanying measures, to manage soil fertility.

Implementation procedures were evaluated very effective.

1.3 Efficiency

According to the results of the EcoFin analysis of the radical terraces project, the project is clearly efficient.

According to budgets, overhead cost are amounting only around 25% of total budget, which indicates a rather good performance of the management team.

All implementation process have been very efficient at all levels : NAO and EU delegation, districts, RADA.

1.4 Sustainability

In order to benefit from the investments, the farmers have to intensify, to reach a high productivity : organic fertilizers will never be in excess, to maintain fertility and soil stability, but availability of same is a matter of concern. Scarcity of manure and organic fertilizers, has to be addressed through alternatives like agro-forestry or integrated farm management, the soil fertility management as still to be organized and funded.

Fertility and productivity management will require high recurrent costs (normally balanced by high yields) : this is a main change in farmers habits, change that has to be strengthen with suitable and intensive support from agricultural extension services. This is clearly a challenge.

1.5 Impact

Impact on erosion is limited to the area covered by the bench terraces, 0.5 % of the districts' areas.

Impact on agricultural production has to be monitored during the next seasons, the present evaluation takes place too early to assess this impact. Agricultural productivity will only be increased in the future if accompanying measures are effective in the coming months.

The programme has not capitalised its experience, nor in technical terms neither for its relevance, profitability for farmers and sustainability (fertility issue).

1.6 Ecofin analysis

An EcoFin analysis was conducted. In this analysis, the following different stages were done:

1. Explaining the links with the key elements of the Logframe
2. Analysing the interests of the main Stakeholders. Direct (OSTR, Districts, RADA and TIGistes) and indirect beneficiaries (households / farmers) were identified.
3. Discussing how to define the With - and Without - Project Situations and a potential alternative situation. In those situations, two kinds of prices have been implemented in the models: maximum sales prices and minimum sales prices.
 1. The without-project situation is the situation in which farmers are not financed to crop in Terraces.
 2. The with-project situation is the situation in which farmers are financed to crop in Terraces and they are encouraged to use fertilizers for environmental impact. The sharing in harvests, productions, average area of terraces per household (0,1181 ha), Maximum average sales prices and Minimum average sales prices directly comes from the results of the adhoc survey initiated by the mission. Therefore, in the situation with project, the situation is nearly the same in terms of variables despite the fact that there are three hypotheses tested:
 - Hypothesis 1 = an increase of every production times 1,5 every year.
 - Hypothesis 2 = an increase of every production times 2 every year.
 - Hypothesis 3 = an increase of every production times 2,5 every year.

Two alternative situations were tested: the first one with private companies instead of households / farmers working in the radical terraces and the second one using progressive terraces instead of radical terraces.

Private companies: an alternative situation in which OSTR and farmers are replaced by private companies was described. It explains why, in this situation a decrease of 20% of the total yearly productions (Revenue) due

to a lack of quality in private entrepreneurs companies and work was integrated in the models. Indeed, in this situation, the idea would be to replace the Inputs, OSTR and households labour contributions by private companies’ contributions.

Progressive Terraces: another alternative situation was tested. In this situation, the use of progressive terraces instead of the use of radical terraces was modelled. The models stay quite the same. Nevertheless, it was considered that yearly productions have a linear increase on five years instead of three years in the radical terraces model. Moreover, total investment costs in the Progressive Terraces model are valued at 54,7 % of the total investment costs of the radical Terraces model.

4. Quantifying Benefits - and comparing them to costs (based on three productivity hypotheses)

On this basis, the Incremental situations (situation without project less situation with project) are measured according to the three hypotheses. These Incremental situations illustrate the Gross Operating Profit generated by the Bench Terraces project (Average areas of Terraces).

This Gross Operating Profit is $GOP = \text{Total Productions} - \text{Total Inputs} - \text{Taxes} - \text{labour hired} - \text{Recurrent Maintenance Costs}$.

5. Developing the Financial analysis

The financial analysis measures the Net Present Values and the Internal Rates of Return for each Incremental situation and alternatives. For quite all of those situations, profitability criteria measured are very good. It is evident that under productivity hypotheses, when the yearly productivity is higher.

The financial discount rate used is 9 %.

Profitability criteria of the basic situation – radical terraces

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Financial					Economic			
Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.295.458.757,92 RWF	29%	2,1	2 years	11.015.005.251,21 RWF	23%	3,46	2 years
Hypothesis 2	17.833.916.303,48 RWF	53%	5,95	2 years	32.455.025.715,59 RWF	46%	10,2	2 years
Hypothesis 3	29.372.373.849,03 RWF	70%	9,79	2 years	53.895.046.179,97 RWF	63%	16,9	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.212.116.934,03 RWF	17%	0,74	2 years	3.539.087.118,55 RWF	10%	1,11	2 years
Hypothesis 2	9.988.182.025,94 RWF	36%	3,33	2 years	18.051.149.923,64 RWF	29%	5,67	2 years
Hypothesis 3	17.764.247.117,84 RWF	51%	5,92	2 years	32.563.212.728,73 RWF	42%	10,2	2 years

Table 2: Profitability criteria of the basic situation – radical terraces

6. Elaborating the Economic Analysis

The consolidated financial data have been translated economically. This process has been carried out. Total Investment Costs are broken down.

Taxes were deleted because it consists in a simple transfer between economic agents, externalities like environmental impact (illustrated in the model by the use of fertilizers and anti-erosion activities).

The Economic discount rate used is 3 %.

7. Summing up conclusions, and Criteria for Decision

According to the EcoFin analysis results, it is clear that the radical terraces project is financially and economically profitable. This project is also sustainable in terms of costs. It takes into accounts and has positive environmental impacts in the rural areas of the country.

Nevertheless, the models show that it would be more relevant for the government to strengthen the creation of progressive terraces because they are more profitable than radical terraces.

Profitability criteria of the alternative – Progressive terraces

Financial					Economic			
Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.622.166.655,10 RWF	34%	4,04	2 years	11.345.962.506,19 RWF	27%	6,52	2 years
Hypothesis 2	17.622.919.985,89 RWF	58%	10,74	2 years	32.085.750.388,39 RWF	50%	18,43	2 years
Hypothesis 3	28.623.673.316,67 RWF	76%	17,44	2 years	52.825.538.270,60 RWF	67%	30,34	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.733.565.455,43 RWF	21%	1,67	2 years	4.121.139.340,68 RWF	13%	2,37	2 years
Hypothesis 2	10.166.666.956,79 RWF	41%	6,20	2 years	18.184.064.530,74 RWF	32%	10,44	2 years

Hypothesis 3	17.599.768.458,15 RWF	56%	10,73	2 years	32.246.989.720,79 RWF	46%	18,52	2 years
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Many effects on the direct and indirect stakeholders are not easily measurable but it is clear that such projects are financially and economically very relevant for them.

1.7 Overall assessment

The intervention has very positive impacts on job creation and future income prospectives.

Balanced with few weaknesses, the most important – a actual challenge - being the demand for extension service still to be organized (and funded) at the MINAGRI level.

Even very positive aspects, the cost per hectare is very high and can not be replicated on a large extend.

Fight against erosion should be conducted through a mix of techniques and agricultural practices, amongst them bench terracing. Progressive terracing is more profitable.

As seen in other parts of the world, sustainable increase of agricultural production and productivity can not be achieved with the recourse to chemicals fertilisers and pesticides, agro-forestry, including breeding will have to be developed.

2 Introduction

2.1 Stabex

Under the STABEX facility, a “Cadre d'Obligations Mutuelles” [COM] 1996-1999 was signed on the 5th of November 2001. The end of its operational phase has been set on the 31th of December 2010, the various commitments are planned to end no later than the 31th of December 2010. The diverse budget allocations have increased the total amount of the COM to just under EUR 24 million.

As a result of the developments made since 2001 in the Rwandan economic policy (particularly in the agricultural sector) and following the decentralization reform, the COM was amended on the 1st of August 2006 and objectives were reoriented towards the following components:

Coffee sub-programme :

This sub-programme has two sections:

- revitalizing the coffee sector through support to OCIR Café;
- new in vitro laboratory for ISAR (infrastructure, equipment and operation costs).

Privatisation sub-programme

Tea, coffee and pyrethrum sectors received financial support mainly intended to:

- conduct studies and strengthen the training process in parallel of the privatization process of OCIR Tea and SOPYRWA;
- contribute to public investment related to the privatization of the tea sector : maintenance of drainage systems; access road works, buildings rehabilitation, training of farmers, agronomists and agricultural extension officers, miscellaneous equipments, surveys of industrial plantations;
- increase pyrethrum flowers drying capacity and availability of improved seeds.

Diversification sub-programme

Following a call for tenders launched locally in 2008, fifteen diversification projects (fish farming, bee-keeping, macadamia, etc.) were selected and funded for a total of EUR 1,500,000.

Decentralization sub-programme

The program brought support to two decentralization components:

- The continuity of actions in the Social Infrastructure Project, aimed to/for? the establishment of rural development programmes and social activities identified by communities, represented and supported by Community Development Committees;
- The implementation of some activities of National Program for Poverty Reduction [PNRP – Programme national de réduction de la pauvreté] within the Ministry of Finance.

The implementation of these sub-programmes was done through various annual cost estimates, which succeeded between 2003 and 2010 and involved various agencies in intervention sectors (MINAGRI, Minicom OCIR Coffee & Tea, RADA, RHODA, ISAR, etc.). The strategy of intervention was revised in 2007 and resulted in the successful dispatch of the unused funds of support of decentralization and diversification components.

2.2 Terracing programme

The budget allocated to the bench terracing programme amounts EUR 3.7 million.

Picture below illustrates the landscape after completion : “walls” producing fodder, flat terraces cultivated.



Illustration 1: Bench terraces (in Nyabihu district)

2.3 Erosion

The process known as weathering breaks up rocks so that they can be carried away by the process known as erosion. Raindrops create splash erosion that moves tiny particles of soil. Water collecting on the surface of the soil collects tiny rivulets and streams and creates sheet erosion as it moves towards. Erosion is a natural process. In general, the background erosion removes soil at roughly the same rate as soil is formed. Background erosion is higher in geological young lands (young mountains, volcanic / seismic areas) than in old (already eroded) landscape.

“Accelerated” soil erosion — loss of soil at a much faster rate than it is formed — **is a problem**, a result of mankind's actions, such as overgrazing or unsuitable cultivation practices.

Accelerated erosion leads to the loss of soil nutrients, reduced soil fertility and subsequent reduction in the growth of the plant, which conduct to:

- reduced ground and canopy cover, reduced yields,
- changed vegetation condition,
- invasion of weed species, ferns (soil acidity indicator),
- etc.

Downstream sedimentation occurs and may fill the plains and river beds during floods. The left materials can damage the infrastructures.

A comprehensive approach, on the catchment area has to be developed.

All relevant information and techniques are presented in “ Schéma Directeur des Marais [SDM] du Rwanda – rapport thématique “Protection des bassins versants. SHER MINAGRI 2003.

3 Context of the mission

3.1 Purpose of the evaluation

The present evaluation takes place while some works are still in progress : watershed protection works in Nyabihu / Jenda, organic fertilizer application on some sites, compliance works after provisional acceptance remarks, etc.

On already completed sites, the very first crops have just been harvested.

On another side, this evaluation comes as the next EDF fund is about to start, with a revised implementation procedure, a sectoral budget support, instead of the project's approach.

3.2 Presentation of the project

3.2.1 Project area

The project works in six districts. According to the 2002 census, the population in these six districts amounts to around 1,650,000 persons (21 % of the national population, which is estimated at around 8 millions).

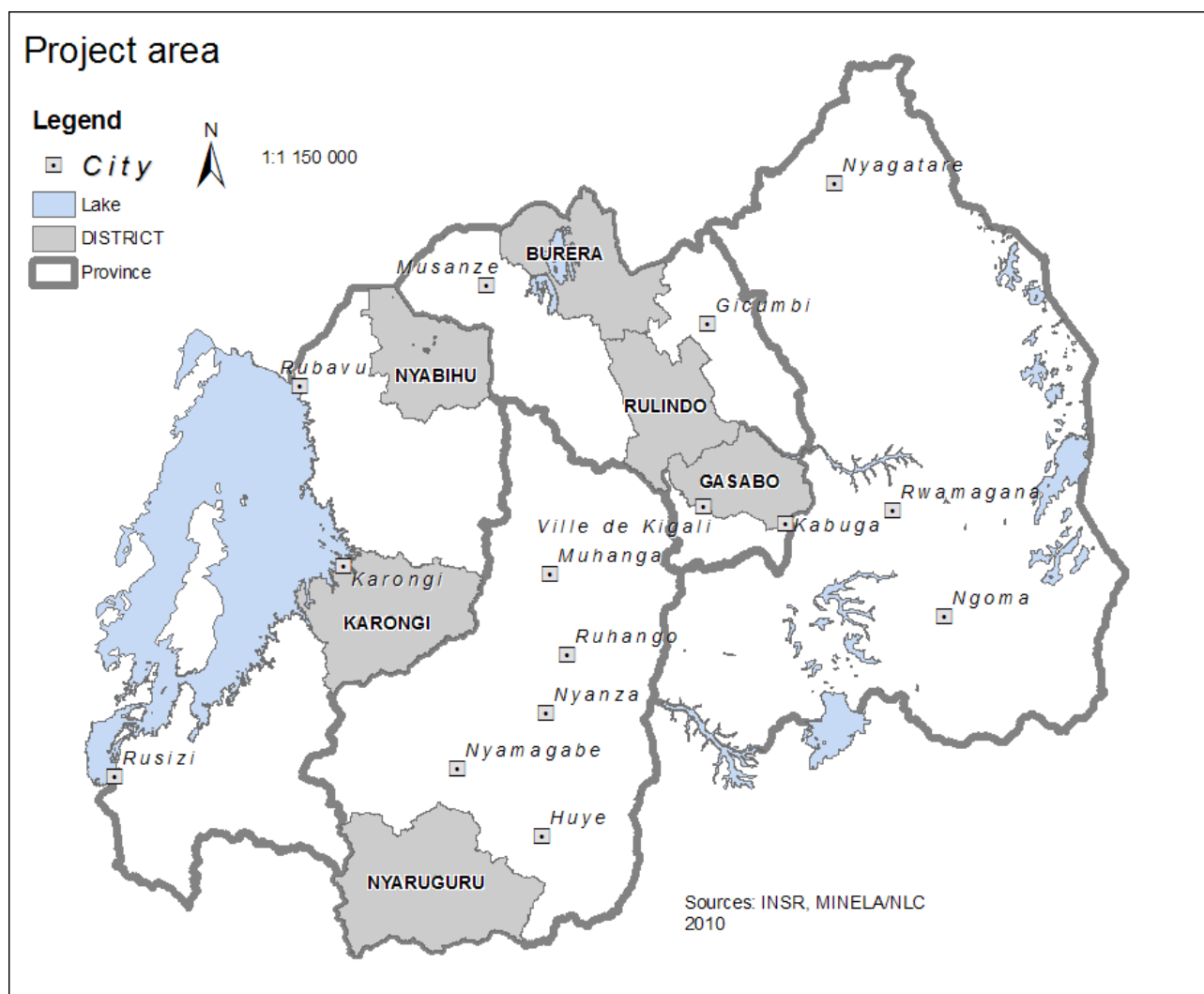


Illustration 2: Project area : six districts

The project area covers 417,500 hectares, 16 % of the national territory (2,530,873ha).

District	Area (km ²)	Households	Population
Burera	644,42	68,043	320,676
Gasabo	429,14	269,562	308,323
Karongi	993,43	59,650	270,339
Nyabihu	531,47	57,939	267,009
Nyaruguru	1009,82	51,396	232,829
Rulindo	567,02	54,654	251,003
			1,650,179

Table 3: Project : areas and population by districts. Source : 2002 census.

3.2.2 Presentation of the project in a few words

The project aims to build around 1,800 hectares of bench terraces on cultivated lands (high slopes) to fight against erosion, to increase agricultural production and productivity, to improve population incomes by high labour intensity works and agricultural intensification, to improve food security.

The project is implemented according to the decentralization policy, through district level cost estimates (French: devis – programmes). RADA is in charge of the overall management.

All procurements are managed by the districts, with respect of the national tendering procedures.

Works are managed by the way of service contracts with specialized private operators [Opérateur spécialisé en terrasses radicales- OSTR]

The labour force is recruited by the district, managed by the OSTR.

3.2.3 Labour force and TIG

For more information on community works [TIG – French : travaux d'intérêt général] refer to § 9.2.9 “TIG and tigestes“ page 100.

As from the conception, the project focuses on high labour intensity works [HIMO: French: haute intensité de main d'œuvre]. This option appears naturally in this case, as the population density is very high and under employment is still a topic in Rwanda.

At the early conception stage of the project, recourse to *tigistes* have been budgeted, with a mix of 80% of labour given to TIG and 20% remaining to the population, to reply to requests of two districts.

3.3 Intervention rationale and logical framework

3.3.1 Overall objective

The programme will:

- improve population incomes by the way of high labour intensity works and intensification of the agriculture;
- improve food security through the increase of agricultural production;
- protect the environment: erosion mitigation in risk areas.

According to these objectives, the following main activities have been identified:

- create 1200 Ha of bench terraces in five districts, under a high intensity labour works approach and a special focus on “Umurenge 2020” sectors;
- train technicians and local population on bench terraces techniques;
- organize beneficiaries for optimal use of developed land
- establish income generating crops on fertilized soil, to make a return on investments.

3.3.2 Purpose of the project

The programme aims to improve the income of people in areas impacted by the bench terracing works, first by a labour-based approach and then by the sustainable increase in agricultural production.

3.3.3 Results

initial	Revised (RADA DP2)
1. 1200 ha off bench terraces build in Burera, Rulindo, Nyaruguru, Karongi and Nyabihu districts;	1.1694 ² Ha de terraces build in Gasabo, Burera, Rulindo, Nyaruguru, Karongi and Nyabihu districts
2. 1200 ha protected from erosion;	2.1694 Ha protected from erosion ;
3. at least 1500 people benefiting directly from revenues related to terracing works	3.At least 2700 people benefiting directly from revenues related to terracing works
4. al least 1000 households having better income from increased productivity of their lands	4.al least 1800 households having better income from increased productivity of their lands.
5. RADA services strengthened in their capacity to implement the national agricultural policies	5.Elected people, districts and sectors' officers trained, supported and advised in bench terracing and erosion mitigation
6. Elected people, districts and sectors' officers trained, supported and advised in bench terracing and erosion mitigation.	

It was initially planned 1260 hectares of bench terraces, but with favourable exchange rate, this target was revised up to 1777 hectares.

In 2010, 1777 hectares have been implemented in 40 sites within 6 Districts (Gasabo, Rulindo, Burera, Nyabihu, Karongi, Nyaruguru), which means 98% of the revised target

In the District Nyabihu, the protection of Jenda watershed has also been realized (after evaluation mission took place).

² End of March 2010, the area covered with bench terraces establishes at 1777 ha

3.3.4 Activities

Related to results 1 & 2:

- Coordinate the contracting process (annual cost estimates management) between Districts, NAO and EU for the provision of funds for development activities and use of terraces
- Participate in identifying sites to develop
- Support districts in various stages of contracting for the recruitment of a specialized organization and provision of inputs (design and publication of tenders, evaluation, writing and execution of contracts, etc.)
- Support districts EDF funds accounting works and technical and financial reporting.

Related to result 3:

- Support local communities in selecting candidates amongst target groups (criteria of vulnerability).
- Organize a reliable and verifiable (according to EU traceability rules) remuneration system of the labour force..

Related to result 4:

- Promote beneficiaries' organizations, aimed to agricultural intensification
- support districts in organizing agricultural inputs supply systems (seeds, fertilizers, small equipment, ...)
- Promote the development of the agricultural production, including processing and improved marketing channels / networks

Related to result 5:

- Train RADA officers in administrative and technical matters (related to project activities);
- provide material support and human resources strengthening to RADA for management activities and supervision

Related to result 6:

- Provide administrative and technical trainings for local government officers (districts, sectors)
- Support local governments in their capacities to manage similar works and maintain them.

3.3.5 Indicators

Logical level	Indicators
<p>Overall objective</p> <ul style="list-style-type: none"> – improve population incomes by the way of high labour intensity works and intensification of the agriculture; – improve food security through the increase of agricultural production; – protect the environment: erosion mitigation in risk areas. 	<p>Improvement of the human development index</p> <p>Reduction of the food crisis frequency</p>
<p>Project purpose</p> <ul style="list-style-type: none"> – to improve the income of people in areas impacted by the bench terracing works, first by a labour-based approach and then by the sustainable increase in agricultural production 	<p>Increase of agricultural yields</p>
<p>Results</p> <ol style="list-style-type: none"> 1 1777 Ha de terraces build in 6 districts 2. 1777 Ha protected from erosion ; 3. 2700 people benefiting directly from revenues 4. 1800 households having better income from increased productivity of their lands. 5. Elected people, districts and sectors' officers trained, supported and advised in bench terracing and erosion mitigation 	<p>Area covered with bench terraces (ha)</p> <p>Increased purchasing power of the population</p> <p>Job creation (with details)</p> <p>Works completed according to norms,</p> <p>Knowledge of maintenance requirements.</p>

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Amounts³ :

	DP1	DP 2
Rada	72 041 000	76 360 200
	DP1	Rider 1
Burera	315,306,957	451,161,291
Gasabo	315,594,308	451,448,661
Karongi	313,737,207	449,591,573
Nyabihu	314,940,633	450,794,967
Nyaruguru	314,535,207	450,389,562
Rulindo	315,594,308	451,448,656

Table 4: Costs estimates : initial amounts and riders

N0	Mois Activités principales	2008	2009												2010			
		12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
1	Recrutement des OSTR																	
2	Plan d’aménagement																	
3	Encadrement/Formation des bénéficiaires																	
4	Recrutement main d’œuvre																	
5	Aménagement des terrasses radicales																	
6	Organisation des producteurs																	
7	Approvisionnement en intrants																	
8	Réception et valorisation des terrasses radicales																	

Table 5: Implementation timetable (greyed = forecast)

3 Rada's comment on final report: "Les Devis Programmes des 6 Districts ont été retouchés 3 fois dans l’objectif d’augmenter la quantité des activités planifiées sur une période de 24 mois : 1260Ha+364Ha+133Ha=177Ha. Au cours de l’évaluation « EcoFin » du Programme terrasses radicales et celle du STABEX dans son début, la fourniture des intrants agricoles était toujours en cours de telle sorte que les données quantitatives n’étaient pas encore réellement disponibles. Les réalisations étant clôturées au 31 Mai 2010, le paquet de toutes les données est actuellement disponible à la coordination du Programme au niveau de RADA. Les données ont été donc réajustées trois fois successives en fonction des augmentations des activités par les avenants aux DP Districts. “

	Burera	Gasabo	Karongi	Nyabihu	Nyaruguru	Rulindo
OSTR recruitment	na	na	na	na	na	na
Studies	na	na	na	na	na	na
Sensitization / Training of beneficiaries	na	na	na	na	na	na
Works start	na	na	na	na	na	na
Provisional acceptance	17/11/09 to 19/01/10	21/01/10 22/01/10	21/12/09 22/12/09	13/10/09 09/11/09	15/10/09 07/01/10	na
Inputs	na	na	na	na	na	na
Producers organization	na	na	na	na	na	na

Table 6: Actual implementation timetable (dates)

Important remark : na : information not available in project's documents. Internal monitoring and reporting are very weak throughout the project. Dates of provisional acceptance were recorded in notes of meetings and notes of site visits, made available by EC delegation officer, but were not compiled by the project.

3.3.7 Comments

Objective

Bench terraces are presented as the solution to soil erosion **and** agricultural production.

One can also distinguish between those two goals and find out the mix of techniques with the best returns in terms of :

- erosion mitigation and
- agricultural production

Vision 2020 puts also a target in potable water availability (for which, as a positive side effect, bench terraces can contribute. The rainfall percolation increase may result in increased spring flows.)

Bench terraces are

- increasing water percolation and thus improving spring water availability (increase of nominal flow)
- (drastically) reducing soil erosion and washing out of fertilizers
and
- as a secondary effect of erosion mitigation, vegetation debris (organic stuff) are kept in place

Adverse side effect: the increase in water percolation leads to an increase of the soil acidity which has to be counterbalanced with as much organic fertilizers as possible and / or lime. Managing soil acidity is compulsory as below pH 5.5, the nutrients are chemically locked in the soil and roots are no longer able to extract them and benefit from them. There is also the Al³⁺ (Aluminium anion) toxicity which occurs when pH is under 5.5 and hampers vegetation growth.

Agricultural production depends of :

- seeds quality
- good agricultural practises : ploughing, seed spacing and seeding date (season), weeding,
- right fertilization, on a soil with controlled acidity
- good prices and market conditions

All factors which are valid also on untouched (not terraced) lands. Production increase could also be achieved on progressive terraces.

Data and research works on land productivity and limiting factors are still not enough documented in order to identify the specific benefit of bench terraces.

Purpose

“The programme aims to improve the income of people in areas impacted by the bench terracing works, first by a labour-based approach and then by the sustainable increase in agricultural production.”

The salaries amounting to half the project overall budget (EUR 3.7 millions), the labour-based approach will certainly achieve to increase the beneficiaries income during the works. Increase in agricultural production does not mean increase in farmers income, the link between production and income is far from being obvious. Sustainability in long term is questionable.

Results

Quantified results are clear and do not require comments.

Achieving the result : *“Elected people, districts and sectors’ officers trained, supported and advised in bench terracing and erosion mitigation.”* will require that extensions officers, scientists, ... have access to relevant documentation, to capitalised information from previous bench terraces projects ⁴ and would require a governmental formal training / extension programme which is not provided for under the present program and which does not exist presently.

⁴ Information scarcely available in Rwanda, not compiled and capitalised.

Activities

Activities are described according to decentralisation policy, giving responsibilities to districts according to their attributions.

Indicators

Indicators are poorly related to logical framework terms.

- *Increase of agricultural yields* do not mean increase of income !
- *Increased purchasing power of the population*, indicator derived from the previous, one lacks relevance. This indicator should be presented at the purpose level, not at the results level.

Erosion is not monitored.

4 Evaluation criteria / topics

According to the Europeaid Methodology⁵ the evaluation is made against the logical framework statements : objectives, results and means, indicators.

Overall objective :

The program will:

- improve population incomes by the way of high labour intensity works and agricultural intensification;
- improve food security through agricultural production increase;
- protect of the environment : erosion mitigation in risk areas

4.1 Relevance

Extent to which the objectives of the development intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and EC's policies.

4.1.1 Relevance to beneficiaries

There are many aspects in this intervention that could interfere in the farmer's decision to build bench terraces on his property :

- opportunity for a direct revenue, direct cash income from labour during the works. This aspects is frequently reported by interviewees as a very positive impact. In fact, in rural areas, cash scarcity is still common and every cash input is most welcome. Half of the total project amount, around RWF 1400 millions has been directly injected in salaries.
- opportunity to get free fertilizers and lime
- opportunity to replace progressive terraces with bench terraces
- neighbourhood or social stress
- -

Technically speaking, ploughing, weeding, ... on flat portions of land (terraces) are easier than on slopes. The very first harvests were promising, but it's almost impossible to identify the effect of the terraces by itself and the effect of the lime and fertilizers.

Christophe Bazivamo , in “Gestion durable des terres au Rwanda”, mentions that women could be reluctant to have to climb terraces walls.

5 EuropeAid Co-operation Office. Joint Evaluation Unit. Evaluation Methods For The European Union’s External Assistance. Guidelines For Project And Programme Evaluation. Volume 3 . 2006. 47 pp.

According to the beneficiaries met during the field visits and after the 180 individual surveys, ... the official discourse / policy has been well integrated. Every peasant met talked about erosion mitigation, no one did complain.

Some negative aspects are minimized by the technicians surrounding the peasant and should be monitored closely :

- intensification implies labour force input peaks during specific periods⁶, which are not seen in low productivity schemes. It is not obvious that every farmer can mobilize the labour force within its own family or can afford to pay for same when required.
- access to credit for seeds, fertilizers, ... implies good market prices and conditions to cash the crops and reimburse the credits. The monetization and access to financial services are still in early development stage.

Even if the farmers met are quite enthusiastic about bench terraces (just after completion) and are requesting more investments of this kind, the relevance should be monitored in the coming months / years.

4.1.2 Relevance to other beneficiaries

Operators

The total amount of the services contracts to the private operators amounts RWF 185 Millions. The operators' market is not known but there is a common understanding that :

- the market depends on public orders solely, and more precisely to cooperation funds flows,
- private operators are not really specialised in bench terraces but are active more widely in all rural works : they recruit personnel according to their contracts and are surviving meanwhile.

In this context, a near RWF 200 millions volume of contracts is very relevant to keep them active.

TIG secretariat

As discussed further (§ 4.5.5 page 52 and in annexes), every LIW program that could involve sentenced persons in daily works helps the Rwandan government to apply its policy as regards to justice.

6 DWHH personal communication

4.1.3 Relevance to national policies

The reference document is the “Vision 2020”. The Pillars of Vision 2020 ⁷ are:

1. The reconstruction of the nation and its social capital;
2. The development of a credible and efficient state governed by the rule of law;
2. Human resource development in line with our objective of turning Rwanda into a prosperous knowledge-based economy;
3. Development of basic infrastructure, including urban planning;
4. Development of entrepreneurship and the private sector, and
5. Modernization of agriculture and animal husbandry.

Extracts of the Vision 2020 policy :

(i) Land use management

*[...] Currently, Rwanda’s land resources are utilized in an inefficient and unsustainable manner, which limits the profitability of land and infrastructure, whilst aggravating the **national capacity to retain rainwater**.*

4.5. Productive high value and market oriented agriculture

*[...] Contrary to conventional wisdom, the most important issue retarding Rwanda’s agricultural development is not land size, but **low productivity** associated with traditional peasant-based subsistence farming. Agricultural policy orientation will have to be overhauled, **promoting intensification so as to increase productivity and achieve growth rates of 4.5 % to 5% per year**. [...]*

The key policy areas that need urgent attention to bring about this transformation include the following: [...]

- *Extensive research and extension services;*
- *Investment in rural infrastructures;*
- *Use of high yielding varieties and **intensive input use**, especially fertilizers;*
- *Environmental control measures **to halt the decline in soil fertility**;*

5.2. Natural Resources and the environment

*The major problem in the field of environmental protection in Rwanda is the imbalance between the population and the natural resources (land, water, flora and fauna and non-renewable resources, which have been degrading for decades). This degradation is observed through massive deforestation, the depletion of bio-diversity, **erosion and land slides**, pollution of waterways and the degradation of fragile ecosystems, such as swamps and wetlands.*

⁷ http://www.rwandagateway.org/article.php3?id_article=106

Indicators	Situation In 2000	Target in 2010	Target in 2020
34. Agricultural population (%)	90	75	50
35. Modernized agricultural land (%)	3	20	50
36. Use of fertilizers (Kg/ha/year)	0.5	8	15
37. Financial credits to the agricultural sector (%)	1	15	20
38. Access to clear water (%)	52	80	100
39. Agricultural production (kcal/day/person (% needs)	1612	2000	2200
40. Availability of proteins/person/day (% of needs)	35	55	65
41. Road network (km/km2)	0.54	0.56	0.60
44. Land portion against soil erosion (%)	20	80	90

So, it is clear that the intervention fully complies with the country reference document.

Extract of EDPRS⁸

Productivity

The slackening in GDP growth is the result of the expansion of output in agriculture being constrained by several factors. Land is scarce and the use of it is constrained by the absence of a well-defined land administration system and poor settlement patterns in rural areas. There is a need to contain the fragmentation and degradation of further arable land as a result of high pressure and soil erosion. The level of technology is low, infrastructure in rural areas is inadequate and human and physical capital is in short supply. As a result, agricultural productivity is low which generates poor returns on private investment.

fertilizers

2.14 ... Ubudehe survey results suggest Rwandans place fertiliser and insecticide as top priorities for improving agriculture, followed by training and extension, anti-erosion and improved seeds.

Soil erosion

2.18 ... rural households are becoming increasingly involved in soil erosion control measures such as building radical terraces, particularly in the Northern and Western provinces of the country, improving watershed management, and engaging in reforestation work.

CPAF indicators (extract)

⁸ Economic Development & Poverty Reduction Strategy 2008 – 2012. 09/2007. 166 pp.

EDPRS STRATEGIC OUTCOMES (Results)	INDICATORS	Source of Data	EDPRS Described Policy Action
1.3 Increased agricultural productivity	1.3.1 Proportion of arable land sustainably managed against soil erosion	Land Commission report (benchmark) Monitoring of District Performance Contracts Annual report of MINAGRI and MINIRENA	Develop and implement programmes for erosion control through sustainable land management
	1.3.2 Mineral fertiliser used (MT)	EICV (benchmark) and BNR and RRA (Customs) for annual statistics	Operationalise National Input Strategy
	1.3.3 Production of key food security crops (1,000 MT cereal equivalents)	Enquete Agricole for benchmark and Crop Assessment for Annual trends	Improve production of key crops through multiplication centres and mother gardens for multiplication in districts and sectors

Table 7: CPAF indicators (extract)

The specific objective of the intervention, and activities, fully comply to the EDPRS reference document and indicators attached to.

STRATEGIC PLAN FOR AGRICULTURAL TRANSFORMATION IN RWANDA

Extract of executive summary

18. The analysis based on thematic and sub-sector approach enabled to identify four programs [...].

19. The program “intensification and development of sustainable production systems” comprises: (i) sustainable management of natural resources and **water and soil conservation** (ii) **integrated livestock systems**; (iii) marshland development; (iv) irrigation ; (v) **supply and use of agricultural inputs**; (vi) food security and vulnerability management.

20. The program of “strengthening of organization and support capacities for professionalism of producers” deals with (i) the **promotion of rural organizations** and the reinforcement of producers’ capacities; (ii) restructuring of proximity services to producers; (iii) rural innovation and research for development; (iv) rural financial systems and agricultural credit development.

21. The third program consists of “Commodity chains promotion and agribusiness development”. It is composed of four sub-programs: (i) creation of a conducive business environment and promotion of entrepreneurship; (ii) commodity chains promotion and development; (iii) processing of agricultural products and competitiveness; (iv) rural support infrastructures.

22. The fourth and last program refers to “legal framework and institutional development”. Its three sub-programs are: (i) legal and regulatory framework reform; (ii) public services

The national policies, from the highest level, are directed *inter alia* towards erosion mitigation and agricultural intensification, which are the bench terraces project objectives.

Rwanda is presently implementing a “Crop Intensification Program” that completes the bench terraces programmes on the seeds and fertilisers aspects.⁹

Even if the present bench terracing programme is fully in line with the national policies, it is not obvious that it will contribute to poverty reduction, to sustainable development, ... weaknesses related to fertility management (acidification) and to farmers organisation are still to be addressed by the government.

4.1.4 Relevance at district level

Works are conducted on the the private domain of individuals (French : domaine privé des particuliers).

Districts are not increasing their private domain (French : domaine privé des districts, attribution du domaine privé de l’État). Impact on districts is further discussed in § 4.5.3 page 51.

Case study : Rulindo priorities

On 29 priorities selected and sorted by the populations of the 17 sectors, the following priorities have links with the project under present evaluation :

rank	Priorités	Priorities
1	Construction et ou réhabilitation adductions d’eau	Improve Water supply
2	Lutte anti-érosive (terrasses, ...)	Erosion mitigation (terraces)
4	Élevage amélioré	Improve breeding
6	Aménagement de routes et pistes	Improve road and feeder road
7	Intrants agricoles	fertilizers and other intrants
15	Reboisement	reforestation

Table 8: Rulindo development plan priorities

Indicateurs spécifiques	EDPRS	Situation 2007	Taux de croissance annuel	Objectif 2012
Exploitation de terrasses existantes	13.000 Ha	700Ha	20,00%	1.400Ha

Table 9: Rulindo terraces 2012 target

Vision de l’Unité l’Unité Terre, Eau, Urbanisation et Infrastructures

En l’an 2012, le District de Rulindo aura développé ses infrastructures et les services de protection de l’environnement.

⁹ As developed below, bench terracing implies intensification, which could be achieved in the short term with chemical fertilisers but will have to shift to a more sustainable mean including organic way of production, most probably with a mix of agro-forestry and cattle rearing integration. Refer to Catalyst project managed by IFDC in the Great Lakes region.

Services composant l’Unité

L’unité est composée par deux services à savoir l’urbanisme, habitat et infrastructures et le service de protection de l’environnement.

Priorités futures de l’Unité

- Lutte anti-érosive par terrassement radical / fighting erosion with bench terraces
- Régionalisation des cultures et promotion des cultures d’exportation / crop regionalisation and promotion of export crops.
- Renforcement des capacités des coopératives / strenghtening cooperatives
- Diffusion d’intrants agricoles / promotion of agricultural inputs use
- Élevage moderne / modern breeding

4.1.5 Relevance to environment topics

As regards to the environment topics, a wider approach would be required, taking the whole catchment area in consideration. A set of erosion mitigation corrective techniques has to be deployed, in conjunction with conservative agricultural practices

4.1.6 Relevance to EU environment and rural development strategies

Rural development, agriculture and food security¹⁰

*Agriculture and rural development are crucial for poverty reduction and growth. To re-launch investment in these areas, the Community will support **country-led, participatory, decentralised and environmentally sustainable territorial development**, aimed at **involving beneficiaries** in the identification of investments and the management of resources in order to support the emergence of local development clusters, while respecting the capacity of eco-systems.*

For results to be sustainable it is essential to promote a coherent and conducive policy environment on all levels.

*The Community will continue to work to **improve food security** at international, regional and national level. It will support strategic approaches in countries affected by chronic vulnerability. Focus will be on prevention, safety nets, improving access to resources, the quality of nutrition and capacity development. Particular attention will be paid to transition situations and to the effectiveness of emergency aid.*

This programme is strongly country-led, managed according to decentralisation policy and could be considered environment friendly. Nevertheless, it is not obvious, considering the lack of information (lack of scientific knowledge) on bench terraces in the region, the fertility issue in particular (acidification) that the present

¹⁰ [http://www.puntosud.org/helpdesk-europeaid/...](http://www.puntosud.org/helpdesk-europeaid/) see : <http://xrl.in/4zdk>

programme alone will contribute to the food security in the long term, at least if not backed up with strong support by the Ministry of Agriculture : extension, subsidies, market developments, ...

4.2 Effectiveness

Extent to which the development intervention’s objectives were achieved, or are expected to be achieved, taking into account their relative importance.

Objectives are on two domains :

- Erosion mitigation, erosion tamed.
- Agricultural productivity / production increased (*Le programme vise à améliorer les revenus des populations des zones concernées par l’aménagement de terrasses radicales, implantées dans le cadre d’une approche HIMO et par l’augmentation durable de la production agricole qui découlera de leur valorisation*).

A third domain can be added : increase of population income, either with direct income and long term improved revenues

Are the bench terraces the best response to this two objectives ?

In a certain extend, bench terraces are one of the best technical response to both objectives on slopes but diminishing margins theory applies in this domain as well and other techniques have to be introduced too.

As regard to erosion control, the problem has to be dealt with at the whole watershed level, from erosion itself to solid material deposit and resulting flooding downstream.

Increase of agricultural productivity ?

The lands are being terraced and fertilised.

According to Le Turonier and Rukazambuga ¹¹, a “*significant increase in the use of fertilizers by farmers and yield increase (3 – 4 times) ...*” can be recorded. But, the assessment of the yield increase is not based on actual harvest weights on measured fields : “*it is interesting to note that the evaluation of the percentage increase differs according to the players*”, with some farmers not involved in the Crop Intensification Program [CIP] having *doubts of the economic relevance to use the fertilizers*.

The lack of accurate (and reliable) monitoring of the production and yields (amongst other data) hampers any sound evaluation; districts officers could be tempted to

11 Joel Le Turionier, Rukazambuga Ntirushwa Daniel. Evaluation report for Crop Intensification Program. Season 2009 A & B. draft. IFDC. §4.3 and §4.5

report according to policies and expectations instead of actual figures, for various reasons.

4.2.1 Identification criteria

Site identification is the districts' responsibilities : ¹²

Les principales activités de coordination technique porteront sur :

- *L'Assistance technique des **Districts dans l'identification, le choix et l'approbation des sites pour les travaux de terrassement radical;***
- *etc.*

1.La cellule de développement : agence d'exécution du programme, assure la mise en œuvre du programme et le suivi quotidien des activités, sous la tutelle du maître d'œuvre, et conformément aux orientations définies par le Comité de Suivi. Plus particulièrement, elle est chargée de :

- *la préparation des programmes d'opérations,*
- ***identification et la sélection des actions à mener avec les autorités locales,***

Although the RADA team informed us on the adequacy of the site selection, no report has been produced to support site selection : comparison of sites, preliminary survey on poverty or land tenure, soil or geology characterization, ...

One has to believe that district's officials did the right choices.

Schéma d'intervention du RADA dans le suivi régulier des travaux de terrassement radical sur l'ensemble de la zone du Programme :

Dans un premier temps avant le début des travaux sur terrain, le RADA a procédé à la formation des bénéficiaires représentés par les comités de contact. Lors des voyages études et formation théorique et pratique dispensé sur Devis Programme RADA, ces comités ont reçu le mandat de représenter les agriculteurs tout en étant représentant du RADA et Districts dans la bonne gestion des chantiers de terrassement (Gestion du petit matériel, contrôle d'enlèvement de la terre arable pour pouvoir conserver la fertilité naturelle du sol, la vérification qualitative et quantitative des intrants agricoles fournis par les prestataires privés etc.). La collaboration entre le RADA et ces comités de contact dans le suivi des activités s'est montrée efficace : La qualité et la quantité des terrasses radicales aménagées reste incomparable et ce à travers cette stratégie mise en place par le RADA pour suivre au quotidien le déroulement des activités.

¹² Extract from RADA DP 1

Hormis les techniciens agronomes des Districts et des Secteurs qui interviennent dans le suivi des activités, le RADA dispose de 4 Techniciens Agronomes chargés de la conservation des sols au niveau provincial qui interviennent régulièrement dans l’évaluation et suivi techniques des terrasses radicales aménagées par différentes OSTR.

Par le biais du Coordinateur, du Régisseur du Programme et du Technicien Consultant en conservation des sols, le RADA fait hebdomadairement 9 descentes de suivi des chantiers de terrassement radical. Ces descentes couvrent efficacement l’ensemble des sites en appréciant les travaux et au besoin en corrigeant les malfaçons éventuelles. Ceci a fait que le Programme a réalisé les terrasses radicales dont la qualité est hautement appréciée par la population et par les autres intervenants dans ce domaine (Projets agricoles, organismes, diverses institutions publiques et privées etc.)

source 1: RADA's comment on final report .

4.2.2 Effectiveness of implementation procedures

Implementation procedures are derived from past projects experiences, in particular the Rwanda Demobilisation and Reintegration Commission which managed labour – based works in years 2005-2010 and did publish a Project Implementation Manuel under an open licence. The RDRC project did itself build on the LIW performed in Kigali by other projects (Mpasi ravine, ia).

The procedures give all the project management and responsibilities to the districts according to the national policy and also provide all kind of support to temporarily strengthen the district staff and capacities :

- technical knowledge is provided through a service contract with a local company, bringing capacities in labour force management and technical issues;
- districts officers are receiving extra payment for increase of work load : accounting works, procurements, reporting, ...
- workers are directly recruited and paid by the district, thus securing the payments, bringing traceability, ...

The bench terracing programme did refer to the procedures established by previous projects, but without referring or using a dedicated implementation manual.

Relations between OSTR and districts

OSTR, either declared like non-profit organization or company, have a service contract with the district, signed after a tender procedure. Tendering lead to the selection of 15 OSTR, for 42 sites. OSTR found the procedure fair.

The 15 selected OSTR (Operators) have adequately performed the works and the procedure for recruitment of labour force (HIMO) has been fully transparent.

OSTR find that the service contract procedure is adequate to perform the works in due time : they find that being freed from paying labour force facilitates their works. Generally speaking, and after the starting period, invoices were paid with normal / acceptable delays. One OSTR complains of 3 months delays for the payment of its invoices. Without investigation to see from where comes the problem (invoicing could be wrongly made), this does not make an issue.

District can still improve OSTR invoices payments, and OSTR express some reserves if, in the future, districts are not backed up with dedicated accountants and régisseurs.

Apparently, no real control of works has been performed. In most cases, the sector agronomist was frequently on site, but with no technical competencies and no technical documents. No check on-the-spot has been made, to check labour force presence.

Labour force management

As regard to the labour force management, the implementation procedures gained from other HIMO projects which took place in the late years in Rwanda and in other countries.

One main constraints in HIMO works is the regularity of salaries payments : a few days delay can result in stopped works.

Under works contracts, enterprise cash flow frequently shows bottlenecks, due to inadequate management but also delays in payments from the part of the project owner (French : maitre d'ouvrage). Cost structure does not compare with high equipment intensity works [HIEq : French Haute intensité d'Équipements – opposite of HIMO] and leads to delays in payments.

With direct payment made by the project owner, the district, cascade delays are very limited and payment can be made available to workers in due time.

According to a survey made within the OSTR, delay of payment of the labour force was not less than 7 days and up to one month. Things did improve with time. Delays of payments were not monitored.

Labour force recruitment

Recruitment has been made by the districts officers, amongst the beneficiaries and neighbours. The procedure is not clearly transparent, but no one did mention any problem in the recruitment process, without any social disturbance.

Comparisons with other projects

- RDRC (KfW funding) : this project started in 2005 and did set up the procedure in a Project Implementation Manual [PIM] published under a public license ¹³. The same procedures are now in use by the bench terraces RADA/STABEX project and other projects.
- DWHH : data not available
- The reforestation programme “Programme d’Appui à la Reforestation au Rwanda” [PAREF 2] uses the same procedures as the RADA : district responsibility to select sites, to manage tenders, tendering for service contracts for works daily organization, ...

4.2.3 Indicators

Indicator	
Area covered with bench terraces (ha)	100% performed
Increased purchasing power of the population	Not monitored
Job creation (with details)	Monitored through accounting works (amount spend in salaries), not reported.
Works completed according to norms, knowledge of maintenance requirements.	No specific reporting.

Table 10: Results indicators

4.3 Efficiency

Extent to which the outputs and/or desired effects have been achieved with the lowest possible use of resources/inputs (funds, expertise, time, administrative costs, etc.).

¹³ Creative Common Attribution , refer to <http://creativecommons.org/about/licenses/>

4.3.1 Cost per hectare

	Burera	Gasabo	Karongi	Nyabihu	Nyaruguru	Rulindo	Average
Mandays/ /ha	990	991	991	1036	963	1003	996
ha	310	310	310	210	300	317	

Table 11: Planned labour force per district, mandays/ha

The table above is made according to budget, not to actual data after completion, actual data which are not available at the time of the evaluation.

HIMO / TIG

In two districts, the labour force was made of 80 % *tigistes* (refer to section “TIG and *tigistes*“ page100) and of 20% beneficiaries and neighbours (general population).

According to districts cost estimates (and not to actual expenses), the cost of labour force was estimated to RWF 648 137 per ha when 80% of works were done by *tigistes*, and RWF 940 344 when works were completely done by the population, paid at the average rate of RWF 850.

All other costs are similar, with or without *tigistes*. The average cost of labour is estimated RWF 842 942, with the use of *tigistes* (for 80 % of the labour force), these cost amount only 77 % of the cost with 100% of the general population.

	Burera	Gasabo	Karongi	Nyabihu	Nyaruguru	Rulindo
Labour	750,777	638,111	751,422	1,506,675	752,504	658,164
Population (20 %)		150,428				156,977
Capitas						10,774
Tigistes (80%)		487,683				490,413

Table 12: labour costs per ha, per district

This is not only a budget issue, but also a political one. The case is further discussed in chapter “TIG“ page 77.

Fertilizers.

Following the Crop Intensification Program [CIP] fertilizers are available at a subsidized price at sectors level. Nation wide prices are :

- DAP : RWF 300 /kg
- urea 46.0.0 : RWF 260 /kg (270 local market price)
- NPK17.17.17 : RWF 370/kg (380 local market price)

According to actual contracts, fertilizers were purchased at much higher prices than 2009 official retail prices.

	Supplier	Nature	kg	RWF/kg	RWF
Burera	Uzabakiriho Jean	NPK17.17.17	67 200	480	
Nyaruguru		NPK17.17.17	67 200	540	36 288 000
Karongi	EMC	NPK17.17.17	67 200	478	32 121 600
Rulindo	Uzabakiliho Jean	DAP 18.46.0	28 700	548	15 727 600
Rulindo	Uzabakiliho Jean	Urea 46.0.0	14 350	410	5 883 500

Table 13: fertilizers and lime : some contracts details

To give an idea of magnitudes,, the consumption of fertilizer in Burera district (recorded by district agronomist) up to December 1st 2009 was of 950 tons:

- DAP 18.46.0 : 180 tons,
- Urea 46.0.0 : 32.5 tons,
- NPK17.17.17 : 728 tons (+ 67.2 tons under RADA contract for terraces).

The prices paid by the project were the market prices at the time the procurement took place, subsidisation came later.

Manure and lime

Lime was purchased and delivered on site, at RWF 35000/ Ton.

Lime has to be applied every 3 to 4 years, at an application rate of 2 – 5 ton/ha.

	Supplier	nature	tons	RWF/ton	RWF
Burera	Uzabakiriho Jean	travertin	560	39,500	22,120,000
Nyaruguru	ALUPA	manure	3,360	12,000	40,320,000
Karongi	ECOCO	Lime	560	35,000	19,600,000
Karongi	ALUPA	manure	4,480	12,000	53,760,000
Rulindo	ALUPA	manure	4,596	11,000	5,055,700
Rulindo	Bavikiyeke	lime	575	35,000	20,107,955

Table 14: Manure and lime contracts : unit costs of supplies

Organic fertilizers availability is countrywide a matter of concern. Manure and composts purchased for a specific project are depleting soil fertility on other cultivated lands. (DWHH personal communication).

During the evaluation, the organic fertilizers seen seemed to be of very poor quality, not matured, this will result in temporary nitrogen depletion in the soil.

Activities of fertilization included the application of lime, manure and fertilizers, but the total quantities of the fertilizers have not been recorded by RADA.

4.3.2 Overhead costs

According to budgets, overhead cost are amounting around 25% of total budget, (roughly speaking 50 % being salaries for labour force, 25 % being supplies).

This figure indicates a rather good performance of the management team, considering the area of intervention, the pressure to complete the works during the time frame.

Procedures are making use of local resources :

- local bank or micro-finance institutions are used for labour force payments : the total costs of labour force payment is therefore optimal. Risks of corruption and “losses” are minimal.
- procurement are made at district level : the project could miss some scale effects but gains in reactivity and procurement management (control of deliveries, ...)
- funds are managed by districts officers, according to normal rules. Two officers are given extra payment for project specific work related to reports and funds management.

Everybody's role is clear :

- service contract for OSTR, with RADA
- labour force contracted by district
- clear relations between districts and RADA
- supervision by EC delegation (monthly meetings)

4.3.3 Calendar and time frame

The whole programme, around 1800 ha of bench terraces, has been implemented in a very short time frame. This is a very positive efficiency criteria.

This performance has been made possible with the right procedures but also the strong involvement of all the partners, including office of the National Authorising Officer [NAO].

Problems have been treated in an participatory approach, on the field. This is particularly the case of site identification (and land owner participation), recourse of *tigistes*, ...

One key factor has been the short time taken for disbursements, mainly in districts' officers hands, but dully supported by RADA , NAO and EU delegation.

The overall works have been achieved quite timely as compared to other components.

4.3.4 Financial and Economic efficiency

According to the results of the EcoFin analysis of the radical terraces project, the project is clearly efficient. All criteria are positive and their values are relevant in financial and economic terms. This is illustrated in the below table summarizing results of the analysis:

Financial					Economic			
Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.295.458.757,92 RWF	29%	2,1	2 years	11.015.005.251,21 RWF	23%	3,46	2 years
Hypothesis 2	17.833.916.303,48 RWF	53%	5,95	2 years	32.455.025.715,59 RWF	46%	10,2	2 years
Hypothesis 3	29.372.373.849,03 RWF	70%	9,79	2 years	53.895.046.179,97 RWF	63%	16,9	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.212.116.934,03 RWF	17%	0,74	2 years	3.539.087.118,55 RWF	10%	1,11	2 years
Hypothesis 2	9.988.182.025,94 RWF	36%	3,33	2 years	18.051.149.923,64 RWF	29%	5,67	2 years
Hypothesis 3	17.764.247.117,84 RWF	51%	5,92	2 years	32.563.212.728,73 RWF	42%	10,2	2 years

Table 15: Profitability criteria of the basic situation – radical terraces

Financial progress is 84% of the budgets. (Figure should be revised after full completion.)

4.4 Sustainability

Extent to which the benefits from the development intervention continue after termination of the external intervention, or the probability that they continue in the long-term in a way that is resilient to risks.

4.4.1 Terraces stability

The main risk on terraces stability is land slides under heavy rains.

Research is very new on this issue in Rwanda. According to local technicians, from operators to local consultants office, cases should be very rare, up to now.

4.4.2 Fertility issue

Then comes the fertility issue : terraces are increasing the rain infiltration rate and thus the soil acidity. Causal sequence of events can be found in the literature ¹⁴. In

¹⁴ Crawford, T. W. Jr., Singh, U. and Breman H. Solving Agricultural Problems Related to Soil Acidity in Central Africa’s Great Lakes Region. IFDC. CATALIST Project Report. 10/2008. 141 pp.

order to benefit from the investments, the farmers have to intensify, to reach a high productivity : keep the soil acidity around pH 5.5, optimal use of fertilizers, .. in order to maximize evaporation through the vegetation (evapo-transpiration) to lessen the soil leaching as much as possible.

Organic fertilizers will never be in excess, to maintain fertility and soil stability, but availability of same is a matter of concern.

In addition to the scarcity of manure and organic fertilizers, which has to be addressed through alternatives like agro-forestry or integrated farm management, the soil fertility management as still to be organized :

- extension officers trained and equipped with testing kits
- (agricultural quality) lime production and marketing organization (nation wide), including access to credit facilities to finance lime purchase once every three years, possibly subsidies, ...
- farmers sensitized, equipped to transport and spread/ bury the lime

4.4.3 Monetization

Fertility and productivity management will require high recurrent costs (normally balanced by high yields) : purchase of chemical fertilizers, spreading and purchase of manure (if available), purchase of lime every two – three years, ... this is a main change in farmers habits, change that has to be strengthen with suitable and intensive support from agricultural extension services.

Compulsory intensification forces monetization : access to credit to purchase inputs, production brought to the market and valued in cash, money savings after harvest, ...

This is confirmed in the Helpage survey in north Rwanda : ¹⁵

Aussi, la majorité des paysans ne sont pas techniquement capables d’exploiter de façon optimale les terrasses. Il leur faut une assistance technique et même financière pour mieux se développer. Le crédit bancaire et le marché d’écoulement des produits agricoles sont nécessaires pour assurer la rentabilisation des terrasses radicales.

The poor farmers are facing a challenge when their lands are transformed in bench terraces, the direct income gained during the works, if any, is very limited and will not be sufficient to allow them to sustain the changes.

15 Helpage Rwanda asbl. Étude des indicateurs de rendement des terrasses radicales en provinces de l’ouest et du nord. Bureau d’études et d’expertise pour le développement. BEED sarl . 163pp.

4.4.4 District level (procedures)

So to be implemented; the project already complied to the national procedures at district level.

Extension services at farmers' levels still have to be improved in order to achieve sustainability.

Districts have been strengthened to cope with works management. As regard to the works completed under the project, the issue is closed.

Extension services at farmers levels still have to be improved in order to achieve sustainability.

4.4.5 Project ownership



Illustration 4: work site panel

Project ownership is defined according to the commonly used definitions of the EU reference documents “Cahiers généraux des charges relatifs aux marchés de services, de fournitures et de travaux financés par le FED” dated 1990.

The land owners are the final beneficiaries of the works and they should agree with the concepts and details of works performed on their lands. They are the real project owners.

In the present project, the responsibilities are attributed as follows :

- Project owner, maitre d'ouvrage¹⁶ : MINECOFIN
- maitre d'oeuvre : MINAGRI / RADA
- maitre d'oeuvre délégué : District

16 http://fr.wikipedia.org/wiki/Ma%C3%A9trise_d%27ouvrage : La maîtrise d'ouvrage est à l'origine de l'expression fonctionnelle des besoins, représente l'utilisateur final de l'ouvrage, et à ce titre le reçoit, voire en assure l'entretien annuel (s'il en est le propriétaire où s'il a reçu mandat pour le faire).

Even if these definitions conforms to the outdated but still in force reference document, they would require some additional agreements to be really effective :

- MINECOFIN could be the main project owner (at least for the EU/EDF funding implementation) but should delegate some responsibilities to the real owners, that is to say the districts (on behalf the beneficiaries) in the present case in a separate agreement with the districts. Administrative management is *de facto* delegated to the districts, conception, scope of works are delegated to RADA, some responsibilities are delegated to owners' contact committees.
- the “maitre d'oeuvre” plays more the role of an architect during a building construction. In the present case, with works organized by contractors under service contracts, the real “maitres d'oeuvres” are more the so called OSTR :
- no controller of works is designated (roles of districts and sectors agronomists are not defined)
- RADA plays more in the role of a project owner doing its normal works supervisor, or of a representative of the funding/ partners institutions : MINAGRI, MINECOFIN and UE

4.4.6 Beneficiaries committees

During the works, beneficiaries committees have been set up, called contact committees, with some responsibilities during the works. These committees are not considered as land owner associations, which are in charge of managing long term sustainability of the bench terraces, including soil fertility, production and profitability,

OSTR mention that those committee were very helpful during the works.

Formally, they had to countersign delivery bills, which is a very good procedure in order to reinforce appropriation and to seek quality.

4.4.7 Financial and economic sustainability

The sustainability of the radical terraces project is not in doubt. Figures measured in the EcoFin analysis of the basic situation show that long term sustainability will be

achieved. For example, the payback period of the project is short (around two years). The cash flow is positive and all costs are covered. The net present values measured in the three hypotheses are positive and become high when productivity increases.

Profitability criteria of the basic situation – radical terraces

Financial					Economic			
<Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.295.458.757,92 RWF	29%	2,1	2 years	11.015.005.251,21 RWF	23%	3,46	2 years
Hypothesis 2	17.833.916.303,48 RWF	53%	5,95	2 years	32.455.025.715,59 RWF	46%	10,2	2 years
Hypothesis 3	29.372.373.849,03 RWF	70%	9,79	2 years	53.895.046.179,97 RWF	63%	16,9	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.212.116.934,03 RWF	17%	0,74	2 years	3.539.087.118,55 RWF	10%	1,11	2 years
Hypothesis 2	9.988.182.025,94 RWF	36%	3,33	2 years	18.051.149.923,64 RWF	29%	5,67	2 years
Hypothesis 3	17.764.247.117,84 RWF	51%	5,92	2 years	32.563.212.728,73 RWF	42%	10,2	2 years

Table 16: Profitability criteria of the basic situation – radical terraces

4.5 Impact

Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.

Impacts have been reviewed to comply with terms of reference. But a comprehensive evaluation of all impacts can not be achieved in the time frame of the mission. More, even if donors are very interested to show the direct impact of the intervention, attributing all the modifications to the project is not relevant.

Nonetheless when donors and recipients try to be accountable for achieving impact, they are severely limiting their potential for understanding how and why impact occurs. The drive to claim credit interferes with the creation of knowledge. As one colleague has expressed it, the singular focus on results yields “clueless feedback.”¹⁷

Impact on social life :

¹⁷ Source : “Outcome mapping. See bibliography.

District	Households	Population	Area (ha)	Terraces (ha)
BURERA	68,043	320,676	64,442	310
GASABO	69,562	308,323	42,914	310
KARONGI	59,650	270,339	99,343	310
NYABIHU	57,939	267,009	53,147	210
NYARUGURU	51,396	232,829	100,982	300
RULINDO	54,654	251,003	56,702	317
		1,650,179	417,531	

Table 17: Districts : population and areas. Data source : Census 2002

4.5.1 Life conditions

Direct income, salaries amounting RWF 1,054,501,500 have been injected in local economies. This direct income is counterbalanced with a reduction of agricultural production on lands under terracing works.

Although one billion Rwandan francs certainly have a local impact, the sum can be related to the active population of each district.

Considering the figures of the 2002 census from Rwandan National Institute of Statistics, the overall population amounts 1.6 million people. The active population is taken as the population aged between 15 and 50 years old. According to the publication of the national population projection 2007-2022, a percentage of 49 % of the total population applies. The number of man.days is converted in annual jobs on a basis of 240 working days per year.

The “Table 18: Direct job creation “ below presents the direct job creation, per district.

District	Population	Active population	Man.days	Annual jobs	% Active pop/ Ann. jobs
BURERA	320,676	157,131	279,787	1,166	0,74%
GASABO	308,323	151,078	57,636 ¹⁸	240	0,16%
KARONGI	270,339	132,466	279,987	1,167	0,88%
NYABIHU	267,009	130,834	285,729	1,191	0,91%
NYARUGURU	232,829	114,086	279,817	1,166	1,02%
RULINDO	251,003	122,991	57,634 ¹⁸	240	0,20%
	1,650,179	808,588	1,240,590	5,169	0,64%

Table 18: Direct job creation

During works, terracing works give jobs to more or less 1 % of the active population, for one year only. It would be interesting to compare with the

¹⁸ Tigistes are not accounted for in the table

unemployment (or under employment) rate and to analyse those figures with the figures of actual jobs or cash flows in the districts. Data are not available.

The way workers are paid (on a bank account) has probably a good impact on the living conditions of workers. This was monitored in another project (Community Based Reintegration – RDRC – KfW, personal communication) and revealed that access, frequently for the first time, to a bank account, to credit facilities, was considered as a very high benefit of the job. This is not monitored by the project.

Impact on local financial institutions could be very high. For Banque Populaire in the CBR-RDRC case, local branch numbers of bank accounts (share holders / sociétaires) were sometimes doubled.

Unfortunately, this is not monitored by the project and the financial institutions need lot of time to provide summaries or analysis on workers' behaviour related to their bank accounts (bank account management at local branches is not yet computerised).

Results of the survey were only partial with a low rate of answers. Nevertheless, answers allowed drawing the following charts illustrating the uses of revenues generated by the project.

For example, according to the survey results, the average number of days worked in radical terraces project was 89,22 days and the median was 60 days. Moreover, the average income per day 912,50 RWF and the median income was 650 RWF per day.

The three next charts illustrate results of the survey concerning the uses of incomes obtained through to the implementation of the project.

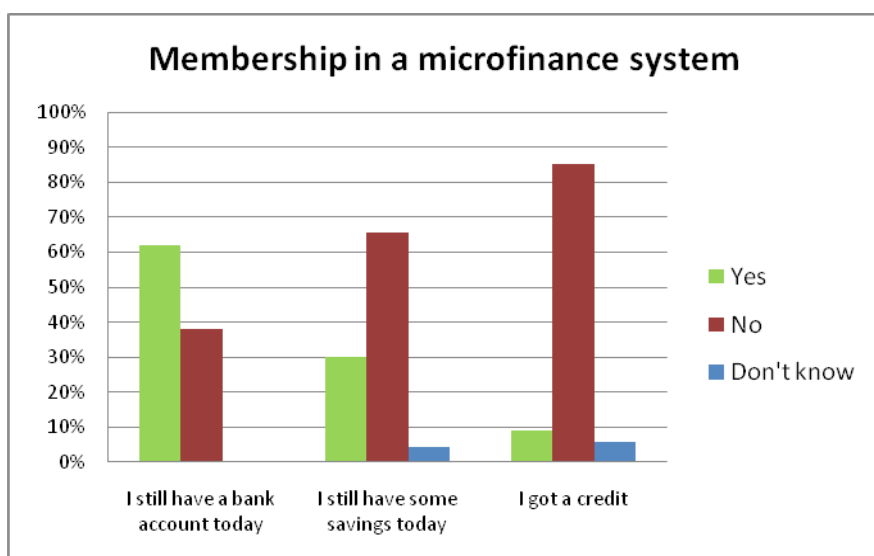


Illustration 5: membership in a micro finance system

The radical terraces project seems to help farmers for bankarisation (60% of them still have a bank account). Nevertheless, savings are clearly lower today (only 30 %). Very few beneficiaries have had an access to a credit (less than 10 %).

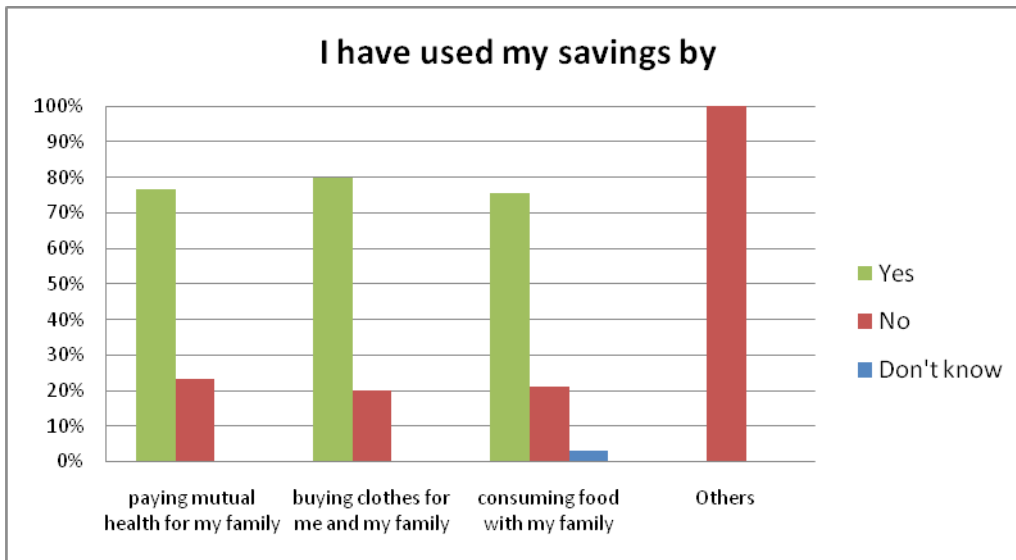


Illustration 6: savings use

As illustrated in the above chart, the choice to use savings for paying mutual health for family is a real success.

On the other hand, savings has not been used a lot for investments.

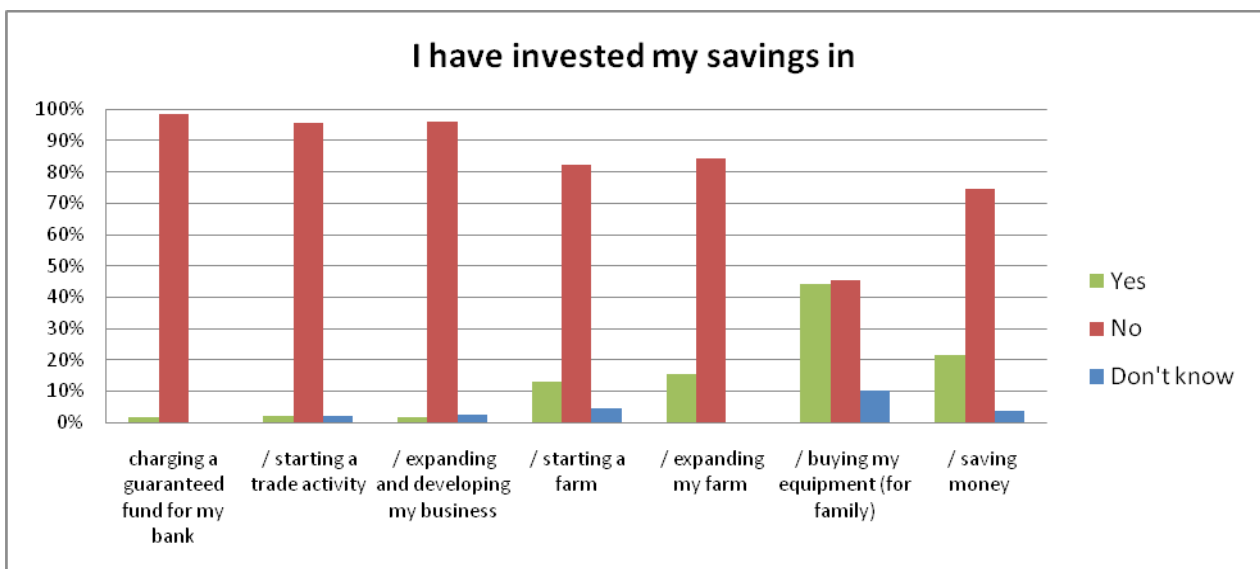


Illustration 7: sectors of investments

Savings would certainly become more significant when expectations in production’s increases will be achieved (indeed, the direct income distributed during works is a replacement income).

As usual, cash received has been used for lots of activities and is considered by workers as a very good opportunity to face social obligations : health insurance, scholarship fees, ... for which cash is compulsory.

TIG

Cases of Gasabo and Rulindo, where *tigistes* have been employed for 80% of the labour force are interesting. Having recourse to *tigistes* implies a smaller impact on districts' economies.

4.5.2 Social organization

On every site, a producers organization has to be created. Those organizations are very young or not yet in place. This is clearly a weakness in the intervention.

4.5.3 Support to local government , to national decentralization policy

The intervention did fully support local governments and worked according to the national decentralization policy.

The whole procedures (service contract, labour force payments, tenders for procurements, ...) proved to be efficient, allowing to achieve 1800 ha of bench terraces in the planned time.

4.5.4 Erosion

Related to districts' areas, new terraces are accounting for a small percentage of the lands, around 0.5 % of each district area. The analysis should refer to agricultural lands only, data are not available.

District	Population	District area (ha)	New terraces (ha)	% ha
Burera	320,676	64,442	302	0,5%
Gasabo	308,323	42,914	287	0,7%
Karongi	270,339	99,343	280	0,3%
Nyabihu	267,009	53,147	210	0,4%
Nyaruguru	232,829	100,982	280	0,3%
Rulindo	251,003	56,702	287	0,51%
	1,650,179	417,531	1,646	0,39%

At national level ¹⁹, 17,6% of the lands are presenting a very high risk of erosion, 21,5% a high risk and 37,5% a moderate risk. Only 23,4% are not prone to erosion. This makes ³/₄ of the country subject to excessive erosion under inappropriate practices ...

Even with a corrective factor, the intervention impact is limited to around 0.5 % of the area.

4.5.5 Social peace / reconciliation TIG

It seems that a consensus emerges in favour of community works TIG being a mean of social reconciliation :

Conclusion ²⁰ : the observations and interviews we were able to carry out show that Community Service is not a measure that has been rejected, either by the convicts or the survivors. On the contrary, Community Service elicits positive reactions in each group, even if opinions are divided and numerous fears persist, primarily due to the difficulty the survivors and the former genocide perpetrators have in imagining a life together again.

Are terracing works *absolutely in the public interest* ? Complying with *it may work on private properties, provided they are monitored by TIG and “the labour is in the interest of many persons, for example by working in the fields of widows or orphans.”* ? ³⁴

The official position of the institution in charge of TIG is to agree to allocate *tigistes* to bench terraces public funded programmes.

It is not clear at all that recourse (or not) to *tigistes* have a positive impact on reconciliation. The issue is still very sensitive in Rwanda amongst the population. This issue should be treated by a sociologist, considering all political aspects, history, gacaca process, ...

4.5.6 Capitalisation

The programme has not capitalised its experience, nor in technical terms neither for its relevance, profitability for farmers and sustainability (fertility issue).

Technical data are not recorded. The present evaluation had to work on budgets not on actual expenses. This leads to the impossibility to differentiate the intervention

¹⁹ SDM, 2003

²⁰ Monitoring and Research Report on the Gacaca. Community Service (TIG). Areas of reflection. www.penalreform.org. 03/2007. 68 pp.

particulars for every sub-region (slopes, soil natures) and does not help to tune any future intervention.

On the technical aspects, the experience remains in the private operators hands only.

Scientific research should be conducted on the bench terraces, on all aspects before any further investments. Presently, in the region, some research is conducted by ISAR and by IFDC.

5 Some results of the survey

Within the evaluation mission, a survey on 180 farmers has been conducted during the first half of March 2010.

Sample was oriented to get 30 interviewees in each district and to have information from people having benefited from the STABEX/RADA project and from other projects.

The survey was conducted by technicians from the OSTR during the first half of March 2010.

DISTRICTS	SECTORS	OSTR
NYARUGURU	-Kibeho-Rusenge-Munini -Busanze-Ruheru	-APA -AMUG
KARONGI	-Mutuntu-Ruganda -Gashangi-Gishyita -Rugabano-Murundi	-ANARWANDA -ANARWANDA -PARVA
GASABO	-Rutungu -Gikomero	-ALUPA -PARVA
BURERA	-Cyeru-Rugengabare -Butaro -Rwerere-Nemba	-UTSE -UTSE -ACEPE
RULINDO	-Cyinzuzi-Shyorongi -Rusiga-Mbogo	-FOREST COMPANY -AMUG
NYABIHU	-Muringa -Jomba-Shyira	-ACEPE -AGRIFOR

Data was encoded and treated with SPSS software, by a local consultant recruited for same. First raw results were made available on March 26th, 2010.

Database is more precisely used for the EcoFin analysis. Here under some basic information is presented.

On the sample, 16 % of the heads of exploitation are women, 60 % of them are widows.

		Gender of head of farm		Total
		male	Female	
District/Akarere	BURERA	26	4	30
	GASABO	29	1	30
	KARONGI	26	4	30
	NYABIHU	24	6	30
	NYARUGURU	24	6	30
	RULINDO	23	7	30
Total		152	28	180

Table 19: Heads of farm : gender issue

Heads of exploitation are of poor qualification, 1/6 claim not to have benefited of any school trainings, only 7 persons (3.89%) had access to (not even completed) secondary school. Only 1/5 claims to be literate.

		Level of academic trainings / literacy				Total
		nul	literacy	Primary school	Secondary school	
District/Akarere	BURERA	3	4	23	0	30
	GASABO	6	9	15	0	30
	KARONGI	5	3	19	3	30
	NYABIHU	8	11	9	2	30
	NYARUGURU	5	8	17	0	30
	RULINDO	7	4	17	2	30
Total		34	39	100	7	180

Table 20: Heads of farms : academic qualifications, literacy

Possibility to use or recourse to external labour force on the farm is rather low : 1/3 of the farmers have been using external labour force during the last seasons.

Do you use external labour force	#	%
Yes	65	36.11
No	94	52.22
No reply	21	11.67
Total	180	100

Table 21: Recourse to external labour force on exploitation

The main reason, 68 %, not to use labour external labour force is the lack of funds to pay (or the cost of the man.day)

“Évaluation, étude d’impact et analyse Ecofin du
Programme de terrassement radical Rwanda COM STABEX 96-99”
Final Report – August 2010

Reason not to use external labour force	#	%
Cost	6	21,43
No need for same	9	32,14
Lack of funds	13	46,43
Total	28	

Table 22: Reason not to use external labour force

As bench terraces are requiring more labour force during peak period, compared to progressive terraces or untouched lands, the issue should be monitored. The survey also indicates that family structure are still impacted by the past conflict with very young people and elders being over represented.

Cultivation tasks are either made by men or women, or both. According to the survey, women are involved in all cultivation stages, including tasks known to be demanding in energy/ force.

Activité	Gender		Total
	Male	Female	
Défrichage / Clearing	32	87	119
Labour / Tillage	87	75	162
Semis / Seedling	82	52	134
Paillage / Mulching	52	38	90
Sarclage / Weeding	76	73	149
Récolte / Harvest	72	72	144
Transport	46	66	112
Gardiennage / Security	24	60	84
Engrais / Fertilisation	48	57	105
Pesticides	21	39	60
% total	46,6	53,4	100

Table 23: cultivation works, gender issue.

It is also very interesting to note that young people are not really involved in agriculture tasks.

“Évaluation, étude d’impact et analyse Ecofin du
Programme de terrassement radical Rwanda COM STABEX 96-99”
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Task	Age				Total
	<18 years	18-35 years	36-55 years	Over 55	
Défrichage / Clearing	1	46	59	11	117
Labour / Tillage	1	65	77	18	161
Semis / Seedling	2	50	67	13	132
Paillage / Mulching	0	38	40	9	87
Sarclage / Weeding	0	58	77	11	146
Récolte / Harvest	1	42	82	13	138
Transport	0	39	61	10	110
Gardiennage / Security	0	32	45	5	82
Engrais / Fertilisation	0	42	53	9	104
Pesticides	0	20	30	5	55
% total	0.4	38.2	52.2	9.2	100

Table 24: cultivation works : age repartition

6 EcoFin analysis

As requested in the Terms of Reference, the EcoFin analysis will follow the standard methodology required for Financial and Economic Analysis of Development Programmes as explained in the Financial and Economic Analysis of Development projects Manual ²¹ (EC, 1997). This methodology is divided into seven key stages of analysis.

Logical Framework of the EcoFin analysis

		Indicators	Sources of verification	Hypotheses
Purpose	Contribute to the measure of the efficiency, sustainability and financial and economic impacts of the “bench terraces” component of the STABEX programme	Efficiency, sustainability and impact indicators	The EcoFin rapport and the Evaluation report	
Results	A complete and relevant EcoFin Analysis achieved according to the methodology of the EcoFin Manual (EC, 1997)	Pay back period, NPV, FIRR, EIRR, ... of the programme	EcoFin analysis report	The EcoFin analysis results are robust and usable.
Activities	Identification of all stakeholders who should be taken into account in the EcoFin analysis Definitions of benchmarks (situation without programme, discount rate, ...) <ul style="list-style-type: none"> • Definition and proposal of alternative options • Operating accounts and consolidated accounts • Externalities and impacts integration (with a focus on tangible environmental impacts) • Indicators measurement (Payback period, NPV, IRR, ...) • Comparisons with alternative options • Conclusion of the analyses 			

Table 25: Logical Framework of the EcoFin analysis

6.1 Description of the different stages of the EcoFin analysis

The 7 Key Stages or 'steps' of Financial & Economic Analysis are:

1. Links with the key elements of the Logframe
2. Analysing the interests of the main Stakeholders
3. How to define the With - and Without - Project Situations
4. Quantifying Benefits - and comparing them to costs
5. Financial analysis

²¹http://ec.europa.eu/europeaid/multimedia/publications/publications/manuals-tools/t103_en.htm

6. Economic Analysis

7. Summing up conclusions, and Criteria for Decision

6.1.1 Linking with Project Cycle Management and the Logical Framework

The first step in an EcoFin Analysis was to place it in context - in relation to other analyses that may be necessary, and to the Logframe of the “Bench Terraces” component of the STABEX programme. It has been used to make project definition more precise and in particular the key elements of the Logframe.

Links between expected results of the EcoFin analysis and the Evaluation criteria (mainly contribution to efficiency, impact and financial and economic sustainability will be measured) has been underlined in the following sections of the EcoFin Analysis.

6.1.2 Analysis of the Main Entities (Stakeholders)

On the Bench Terraces site of the STABEX program, main entities identified and analysed would include:

- 15.047 households/farmers owning 0,1181 ha each of terraces (for a total of 1.777 ha) on average. Many data was collected on those households via a survey conducted by interviewers. Farmers were the labour force and the direct beneficiaries of the project.
- OSTR (they are directly managing the labour force of the project),
- Districts (responsible for contracting for the recruitment of specialized organizations(OSTR) and provision of inputs (seeds, fertilizers, small equipment, ...)),
- RADA (responsible for administrative and technical matters),
- « TIGistes » (les « Travaux d’intérêt général », or community service).

Indirect beneficiaries would include the population who benefited from the creation of new jobs and a direct use of labour in the bench terraces.

6.1.3 Defining the With-Project and Without-Project Situations and possible Alternatives

As explained in the EcoFin methodology, situations with and without the bench terraces have to be described and translated in terms of benefits and costs supported by the stakeholders. The incremental situation is defined as the with-project situation minus the without-project situation.

According to data available the financial models have been design with several variables. Moreover, two scenarii have been taken into account:

- The first one includes Maximum average sales prices of harvests productions and seeds (RWF/kg) and,
- The second one taking into account the Minimum average sales prices of harvests productions and seeds (RWF/kg).

The sharing in harvests, productions, average area of terraces per household (0,1181 ha), Maximum average sales prices and Minimum average sales prices directly comes from the results of the adhoc survey initiated by the mission.

The chosen time scale is a year and the project effects are measured on a twenty-year time frame.

Both with and without situations are tested according to Maximum and Minimum prices of productions measured by speculation. The below table gives those prices:

	Average Max Price (RWF / kg)	Average Min Price (RWF / kg)
Beans	402,73 RWF	228,11 RWF
Maize	224,57 RWF	150,34 RWF
Sorghum	248,27 RWF	170,98 RWF
Sweet potatoes	107,14 RWF	67,54 RWF
Potatoes	121,48 RWF	78,73 RWF
Colocase	180,00 RWF	120,91 RWF
Fruits	254,29 RWF	210,00 RWF

Table 26: Maximum and minimum prices used in the analyses

6.1.4 The “without-project” situation

The without-project situation is the situation in which farmers are not financed to crop in Terraces.

Revenue:

- The yearly production of beans, maize, sorghum, sweet potatoes, potatoes, taro (arrow-root, Colocasia esculenta, colocase) and fruits. This amount of production is the sale price (RWF) * the sum of harvests quantities per year (kg) * the average area (ha) allocated for such yield (value from the survey conducted by the mission). See table below to know the amount of revenue. The table below gives revenue according to the Min or Max sales prices.
- The yearly revenue of labour is considered to be zero in the without-project situation for the investment in bench terraces.

Year	Total Yearly Productions by household with Max Prices	Total Yearly Productions by household with Min Prices
1	240.588,08 RWF	164.128,22 RWF
2	240.588,08 RWF	164.128,22 RWF
3	240.588,08 RWF	164.128,22 RWF
4	240.588,08 RWF	164.128,22 RWF
5	240.588,08 RWF	164.128,22 RWF
6	240.588,08 RWF	164.128,22 RWF
7	240.588,08 RWF	164.128,22 RWF
8	240.588,08 RWF	164.128,22 RWF
9	240.588,08 RWF	164.128,22 RWF
10	240.588,08 RWF	164.128,22 RWF
11	240.588,08 RWF	164.128,22 RWF
12	240.588,08 RWF	164.128,22 RWF
13	240.588,08 RWF	164.128,22 RWF
14	240.588,08 RWF	164.128,22 RWF
15	240.588,08 RWF	164.128,22 RWF
16	240.588,08 RWF	164.128,22 RWF
17	240.588,08 RWF	164.128,22 RWF
18	240.588,08 RWF	164.128,22 RWF
19	240.588,08 RWF	164.128,22 RWF
20	240.588,08 RWF	164.128,22 RWF

Table 27: Revenue on productions in the without project situation

Taxes:

There is a Tax of 1 % ²² on Revenue collected (then subtracted to the yearly revenues in the Gross Value Added line).

Inputs:

The Inputs values are measured on the basis of seeds costs (RWF/ kg) and quantities used per year (kg) (Beans, Maize, Sorghum, Potatoes).

In this situation, there is no use of fertilizers (NPK, Urea, Lime, and Manure).

²² Source: "Rwanda :Comprehensive Food Security and Vulnerability Analysis and Nutrition Survey", July 2009 World Food Programme

Gross Operating Profit (GOP):

$GOP = \text{Total Productions} - \text{Total Inputs} - \text{Taxes} - \text{labour hired} - \text{Recurrent Maintenance Costs}$.

The Cumulated Total of the GOP is measured to give an idea on the Payback period.

6.1.5 The “with-project” situation

In this situation, the farmers are financed to crop in Terraces and they are encouraged to use fertilizers.

The sharing in harvests, productions, average area of terraces per household (0,1181 ha), Maximum average sales prices and Minimum average sales prices directly comes from the results of the adhoc survey initiated by the mission.

Revenue:

- The yearly production of beans, maize, sorghum, sweet potatoes, potatoes, colocase and fruits. This amount of production is the sale price (RWF) * the sum of harvests quantities per year (kg) * the average area (ha) allocated for such yield (value from the survey conducted by the mission). According to the three different hypotheses tested in the with-project situation, the amounts of harvests quantities are multiplied by 1,5 in Hypothesis 1, by 2 in Hypothesis 2 and 2,5 in Hypothesis 3²³. It is considered that there is no production in year 1 (time needed to start the process of yields in the project), then the productions begin to increase gradually to achieve the full production level in year 5. It means that 3 complete years after the implementation of the project are necessary to become fully productive.
- The revenue of labour is considered to be received the first year of the project implementation and the value received by individual is the total Investment cost amount divided by the area concerned * the average area owned by individual (=2,999,794,275RWF / 1,777ha =1,688,122 RWF/ha * 0.1181 ha). The result of this is multiplied by the share of labour in the total investment costs (48.34%).

Taxes:

²³ See Table 2 to know revenue on productions of the without project situation. Those revenue are multiplied by 1,5 or 2 or 2,5 in the different hypothesis of the with-project situation.

- There is a Tax of 1% on Revenue collected (then subtracted to the yearly revenues in the Gross Value Added line).

Inputs:

- The Inputs values are measured on the basis of seeds costs (RWF/ kg) and quantities used per year (kg) (Beans, Maize, Sorghum, Potatoes).
- In this situation, fertilizers (NPK, Urea, Lime, and Manure) are used as inputs.

Labour hired:

- 15 %²⁴ of the value of the Total Inputs is considered as the labour hired from outside the household for working in the terraces.

Recurrent Maintenance costs:

- A share of 2% of the total Investment cost per individual is counted as Recurrent Maintenance cost.

Gross Operating Profit (GOP):

- $GOP = \text{Total Productions} - \text{Total Inputs} - \text{Taxes} - \text{labour hired} - \text{Recurrent Maintenance Costs}$.
- The Cumulated Total of the GOP is measured to give an idea on the Payback period.

Therefore, in the situation with project, the situation is nearly the same in terms of variables despite the fact that there are three hypotheses tested:

- Hypothesis 1 = an increase of every production times 1,5 every year.
- Hypothesis 2 = an increase of every production times 2 every year.
- Hypothesis 3 = an increase of every production times 2,5 every year.

There are very few results available on the actual observed increases because the investments are very recent and not enough results are available on this subject

²⁴ Source: "Prioritizing Rural Public Works : Intervention in Support of Agricultural Intensification "IFCD -Helpage Rwanda June 2007

from the agricultural research centres. At this stage, it is quite impossible to isolate the effect of fertilizer, lime and manure to the effect "terraces" itself.

A conservative assumption was made on the residual value. It is considered null.

The “incremental situation”

The “incremental situation” is the “with project” minus the “without project” situation. In the end the project should generate more net benefits (benefits minus costs) than without the project.

Cash flows projection of the three situations (with, without and incremental)

On this basis, the Incremental situations are measured according to the three hypotheses. These Incremental situations illustrate the Gross Operating Profit generated by the Bench Terraces project (Average areas of Terraces).

This Gross Operating Profit is **GOP = Total Productions – Total Inputs – Taxes – labour hired – Recurrent Maintenance Costs.**

Table below presents the situation of incremental cash flows with maximum prices.

Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
1	201.962 RWF	-39.984 RWF	-241.946 RWF	-39.984 RWF	-241.946 RWF	-39.984 RWF	-241.946 RWF
2	201.962 RWF	179.128 RWF	-22.834 RWF	179.128 RWF	-22.834 RWF	179.128 RWF	-22.834 RWF
3	201.962 RWF	218.825 RWF	16.863 RWF	258.522 RWF	56.560 RWF	298.219 RWF	96.257 RWF
4	201.962 RWF	253.608 RWF	51.646 RWF	333.002 RWF	131.040 RWF	412.396 RWF	210.434 RWF
5	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
6	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
7	201.962 RWF	293.305 RWF	91.343 RWF	412.396 RWF	210.434 RWF	531.487 RWF	329.525 RWF
8	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
9	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF

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Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
10	201.962 RWF	293.305 RWF	91.343 RWF	412.396 RWF	210.434 RWF	531.487 RWF	329.525 RWF
11	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
12	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
13	201.962 RWF	293.305 RWF	91.343 RWF	412.396 RWF	210.434 RWF	531.487 RWF	329.525 RWF
14	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
15	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
16	201.962 RWF	293.305 RWF	91.343 RWF	412.396 RWF	210.434 RWF	531.487 RWF	329.525 RWF
17	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
18	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF
19	201.962 RWF	293.305 RWF	91.343 RWF	412.396 RWF	210.434 RWF	531.487 RWF	329.525 RWF
20	201.962 RWF	298.219 RWF	96.257 RWF	417.310 RWF	215.348 RWF	536.401 RWF	334.439 RWF

Table 28: Situation of incremental cash flows with Maximum prices

Table below presents the situation of incremental cash flows with minimum prices

Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
1	126.363 RWF	-39.872 RWF	-166.236 RWF	-39.872 RWF	-166.236 RWF	-39.872 RWF	-166.236 RWF
2	126.363 RWF	103.544 RWF	-22.820 RWF	103.544 RWF	-22.820 RWF	103.544 RWF	-22.820 RWF
3	126.363 RWF	130.625 RWF	4.261 RWF	157.706 RWF	31.343 RWF	184.787 RWF	58.424 RWF
4	126.363 RWF	152.792 RWF	26.428 RWF	206.954 RWF	80.591 RWF	261.117 RWF	134.753 RWF
5	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
6	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
7	126.363 RWF	179.873 RWF	53.510 RWF	261.117 RWF	134.753 RWF	342.360 RWF	215.997 RWF
8	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF

Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
9	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
10	126.363 RWF	179.873 RWF	53.510 RWF	261.117 RWF	134.753 RWF	342.360 RWF	215.997 RWF
11	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
12	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
13	126.363 RWF	179.873 RWF	53.510 RWF	261.117 RWF	134.753 RWF	342.360 RWF	215.997 RWF
14	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
15	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
16	126.363 RWF	179.873 RWF	53.510 RWF	261.117 RWF	134.753 RWF	342.360 RWF	215.997 RWF
17	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
18	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF
19	126.363 RWF	179.873 RWF	53.510 RWF	261.117 RWF	134.753 RWF	342.360 RWF	215.997 RWF
20	126.363 RWF	184.787 RWF	58.424 RWF	266.031 RWF	139.667 RWF	347.274 RWF	220.911 RWF

Table 29: Situation of incremental cash flows with Minimum prices

The financial analysis in the next section measures the Net Present Values and the Internal Rates of Return for each Incremental situation. Results of this analysis are given in the next section.

The discount rate used is 9 %²⁵.

Comparison with variants

Private companies

An alternative situation in which OSTR and farmers are replaced by private companies was described. It explains why, in this situation a decrease of 20% of the total yearly productions (Revenue) due to a lack of quality in private entrepreneurs companies and work was integrated in the models. Indeed, in this situation, the idea would be to replace the Inputs, OSTR and households labour contributions by private companies’ contributions.

²⁵ 18% of interest rate of commercial banks – inflation in 2009 (9%).

Progressive Terraces

Another alternative situation was tested. In this situation, the use of progressive terraces instead of the use of radical terraces was modelled. The models stay quite the same. Nevertheless, it was considered that yearly productions have a linear increase on five years instead of three years in the radical terraces model (source of this hypothesis: Fleskens Luuk. “Prioritizing Rural Public Works Interventions In support of Agricultural Intensification”. IFDC. Catalist project. 06/2007" page 19). Moreover, total investment costs in the Progressive Terraces model are valued at 54,7 % of the total investment costs of the radical Terraces model (Man / day ratio used = 545 MD – source: fiche used in the paragraph 5.3.1 of the report).

The following tables give amounts of cash flows in the without and with project situations under the three different hypothesis explained earlier.

Table below presents the situation of incremental cash flows in the alternative situation with maximum prices

Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
1	201.962 RWF	-135.394 RWF	-337.356 RWF	-135.394 RWF	-337.356 RWF	-135.394 RWF	-337.356 RWF
2	201.962 RWF	117.206 RWF	-84.756 RWF	117.206 RWF	-84.756 RWF	117.206 RWF	-84.756 RWF
3	201.962 RWF	148.964 RWF	-52.998 RWF	180.721 RWF	-21.241 RWF	212.479 RWF	10.517 RWF
4	201.962 RWF	175.807 RWF	-26.155 RWF	239.322 RWF	37.361 RWF	302.838 RWF	100.876 RWF
5	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
6	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
7	201.962 RWF	207.565 RWF	5.603 RWF	302.838 RWF	100.876 RWF	398.111 RWF	196.149 RWF
8	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
9	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
10	201.962 RWF	207.565 RWF	5.603 RWF	302.838 RWF	100.876 RWF	398.111 RWF	196.149 RWF
11	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
12	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF

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Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
13	201.962 RWF	207.565 RWF	5.603 RWF	302.838 RWF	100.876 RWF	398.111 RWF	196.149 RWF
14	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
15	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
16	201.962 RWF	207.565 RWF	5.603 RWF	302.838 RWF	100.876 RWF	398.111 RWF	196.149 RWF
17	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
18	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF
19	201.962 RWF	207.565 RWF	5.603 RWF	302.838 RWF	100.876 RWF	398.111 RWF	196.149 RWF
20	201.962 RWF	212.479 RWF	10.517 RWF	307.752 RWF	105.790 RWF	403.025 RWF	201.063 RWF

Table 30: Situation of incremental cash flows in the alternative situation with Maximum prices

Table below presents the situation of incremental cash flows in the alternative situation with minimum prices.

Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
1	126.363 RWF	-135.283 RWF	-261.646 RWF	-135.283 RWF	-261.646 RWF	-135.283 RWF	-261.646 RWF
2	126.363 RWF	56.761 RWF	-69.602 RWF	56.761 RWF	-69.602 RWF	56.761 RWF	-69.602 RWF
3	126.363 RWF	78.426 RWF	-47.937 RWF	100.091 RWF	-26.272 RWF	121.756 RWF	-4.607 RWF
4	126.363 RWF	95.177 RWF	-31.187 RWF	138.507 RWF	12.143 RWF	181.837 RWF	55.473 RWF
5	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
6	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
7	126.363 RWF	116.842 RWF	-9.522 RWF	181.837 RWF	55.473 RWF	246.831 RWF	120.468 RWF
8	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
9	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
10	126.363 RWF	116.842 RWF	-9.522 RWF	181.837 RWF	55.473 RWF	246.831 RWF	120.468 RWF
11	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF

Year	GOP without project	GOP with-project Hypothesis 1	GOP Incremental Hypothesis 1	GOP with-project Hypothesis 2	GOP Incremental Hypothesis 2	GOP with-project Hypothesis 3	GOP Incremental Hypothesis 3
12	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
13	126.363 RWF	116.842 RWF	-9.522 RWF	181.837 RWF	55.473 RWF	246.831 RWF	120.468 RWF
14	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
15	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
16	126.363 RWF	116.842 RWF	-9.522 RWF	181.837 RWF	55.473 RWF	246.831 RWF	120.468 RWF
17	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
18	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF
19	126.363 RWF	116.842 RWF	-9.522 RWF	181.837 RWF	55.473 RWF	246.831 RWF	120.468 RWF
20	126.363 RWF	121.756 RWF	-4.607 RWF	186.751 RWF	60.387 RWF	251.746 RWF	125.382 RWF

Table 31: Situation of incremental cash flows in the alternative situation with Minimum prices

6.1.6 Quantifying benefits

The core of financial and economic analysis is to put a monetary value on costs and benefits. Costs are usually known, but some benefits may not have a price, and can be difficult to value (= "non-tangible").

Cost - Benefit Analysis :

- values benefits by direct calculation or by proxies
- includes 'Cost recovery' (contributions by users to pay for services) in calculating costs, cash flows, solvency and sustainability. It is important to verify affordability.
- allows calculating profitability criteria that show the proportion between costs and benefits, and can be used to choose between various possible projects or components.

Profitability criteria

1 - The NPV is the Net Present Value of the project, using a defined discount rate (rate of loss of value of money over time or opportunity cost of capital). It is an

absolute figure, an amount that can be compared to the return (NPV) of other investments of the same amount. If alternative projects require investments of different sizes, it is recommended to divide the NPV of each project by the discounted investment, so as to allow comparisons between these projects.

2 - The IRR - Internal Rate of Return - is the discount rate that makes the NPV equal to zero. In other words, the IRR should at least be above the opportunity cost of capital in the country where the project takes place.

Both the IRR and the NPV should be calculated, as they do not provide the same information

6.2 Financial Analysis

The financial evaluation of the project results are obtained from the incremental situations illustrated by the consolidated financial cash flows in the three hypotheses. Those results are presented in the tables above. The first two tables show profitability criteria for the initial situation (as described in section 1.3.) for individual farmers.

In the financial analysis process, cash flows of individual farmers were designed. Syntheses of these cash flows are presented in Tables 3 and 4. Then, individual cash flows were consolidated through the following stages:

1. Investments costs for the overall project are included in the model. Costs are spread evenly over the first three years of the project.
2. Financial Operating Profits are measured at the level of the overall project instead of at the level of households. It means that individual incremental values are multiplied by the overall area concerned by bench terraces (= $(1/0,1181) * 1777$ ha).
3. An Inflation rate is applied for the first 4 years (year 4 is the baseline).

Year	Inflation rate
2007 (Year 1)	6,6%
2008 (Year 2)	22,0%
2009 (Year 3)	9,0%

Table 32: Inflation rates

4. The Financial discount rate used is 9%²⁶.

²⁶ 18% of interest rate of commercial banks - inflation in 2009 (9%).

The use of these variables and data in the financial analysis lead to the following financial profitability criteria. Firstly, tables 33 and 34 present criteria for the consolidated initial situation.

Initial consol - Financial - Max Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.295.458.757,92 RWF	29%	2,10	2 years
Hypothesis 2	17.833.916.303,48 RWF	53%	5,95	2 years
Hypothesis 3	29.372.373.849,03 RWF	70%	9,79	2 years

Table 33: Criteria for Financial profitability in the initial situation with Maximum prices

Initial consol - Financial - Min Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.212.116.934,03 RWF	17%	0,74	2 years
Hypothesis 2	9.988.182.025,94 RWF	36%	3,33	2 years
Hypothesis 3	17.764.247.117,84 RWF	51%	5,92	2 years

Table 34: Criteria for Financial profitability in the basic situation with Minimum prices

Tables 33 and 34 show a very good individual profitability for farmers and a high consolidated one. The Net Present Value is always positive in each hypothesis and the Internal rate of return is always higher than the financial discount rate (9%) in all cases.

Nevertheless, there is a clear sensitivity to agricultural prices.

The alternative situation financial analysis

In the tables below, profitability criteria for the alternative situation are given according to Maximum prices and Minimum prices situations. Figures in these tables show that the alternative situation in which firms are contracted to a much lower profitability. This is due to the lack of quality of work provided by such companies. In this alternative situation, there is no revenue distributed to farmers to allow them achieving the investment in bench terraces in the contrary of other situations.

Criteria show that in the worst hypothesis (hypothesis with the productions of the “without project” situation times 1,5), the NPV is negative.

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Altern consol - Financial - Max Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	-2.853.761.490,30 RWF	na	-0,95	3 years
Hypothesis 2	6.377.004.546,15 RWF	26%	2,13	3 years
Hypothesis 3	15.607.770.582,59 RWF	43%	5,20	3 years

Table 35: Criteria for Financial profitability in the alternative situation with Maximum prices

Altern consol - Financial - Min Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	-3.953.334.235,88 RWF	na	-1,32	4 years
Hypothesis 2	2.343.857.238,36 RWF	17%	0,78	3 years
Hypothesis 3	8.641.048.712,60 RWF	33%	2,88	3 years

Table 36: Criteria for Financial profitability in the alternative situation with Minimum prices

As explained earlier, another alternative situation was tested. In this situation, yearly productions have a linear increase during the first five years. This hypothesis is based on the theory developed in the "Fleskens Luuk. Prioritizing Rural Public Works Interventions In support of Agricultural Intensification. IFDC. Catalist project. 06/2007" document. In this document, it is explained that productions in radical and progressive terraces are quite the same but that the timing of those productions vary a little bit.

In the progressive terraces situation, total investment costs are 54,7 % of the investment costs in the radical terraces situation.

Tables below give more details on the results of the financial analysis of this variant.

Progressive consol - Financial - Max Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.622.166.655,10 RWF	34%	4,04	2 years
Hypothesis 2	17.622.919.985,89 RWF	58%	10,74	2 years
Hypothesis 3	28.623.673.316,67 RWF	76%	17,44	2 years

Progressive - Financial - Min Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.733.565.455,43 RWF	21%	1,67	2 years
Hypothesis 2	10.166.666.956,79 RWF	41%	6,20	2 years
Hypothesis 3	17.599.768.458,15 RWF	56%	10,73	2 years

Figures obtained by measuring financial profitability criteria of this variant are very good. This alternative situation of progressive terraces is financially very profitable.

6.3 The Economic Analysis

The consolidated financial data have been translated economically. This process has been carried out as follows:

1. Total Investment Costs are broken down:

	Percentage	Amount
Supplies	28,79%	863.640.771,77 RWF
Taxes	19,80%	
Labor	5,00%	
Inputs	75,20%	
OSTR	8,27%	248.082.986,54 RWF
Labor	80,00%	
Inputs	20,00%	
Households labor	48,34%	1.450.100.552,54 RWF
RADA	4,84%	145.190.042,91 RWF
Labor	90,00%	
Inputs	10,00%	
Management fees + other fees	9,76%	292.779.921,24 RWF
Labor	80,00%	
Inputs	20,00%	
Total	100,00%	2.999.794.275,00 RWF

Table 37: Break down of total investment costs

In the alternative situation, the Total Investment Costs are broken down differently:

	Percentage	Amount
Contracted private companies	85,40%	2.561.824.310,85 RWF
RADA	4,84%	145.190.042,91 RWF
Labor	90,00%	
Inputs	10,00%	
Management fees + other fees	9,76%	292.779.921,24 RWF
Labor	80,00%	
Inputs	20,00%	
Total	100,00%	2 999 794 275

2. Taxes were deleted because it is a transfer between stakeholders and then has no impact on the collectivity.
3. There is a subsidy on fertilizers (for a value of 25% of the fertilizers used as inputs) at the consolidated level.

4. Economic price of labour is the same than the financial price of labour (so, no change).
5. « Tigistes » labour has been added in the total labour amount (share of labour in the total investment costs) (= 292,207 RWF/ha * 317 ha + 292,207 RWF/ha * 310 ha).
6. There is a positive externality due to anti erosion (25% of the amount of NPK used as input) at the consolidated level.
7. The same inflation rates than in the financial situation are used.
8. The economic discount rate used is 3%²⁷.

According to these variables and data, Tables 38 and 39 give the economic profitability criteria for the initial economic situation and tables 40 and 41 give the same criteria for the economic alternative situation.

Initial consol - Economic - Max Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	11.015.005.251,21 RWF	23%	3,46	2 years
Hypothesis 2	32.455.025.715,59 RWF	46%	10,20	2 years
Hypothesis 3	53.895.046.179,97 RWF	63%	16,93	2 years

Table 38: Criteria for Economic profitability in the basic situation with Maximum prices

Initial consol - Economic - Min Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	3.539.087.118,55 RWF	10%	1,11	2 years
Hypothesis 2	18.051.149.923,64 RWF	29%	5,67	2 years
Hypothesis 3	32.563.212.728,73 RWF	42%	10,23	2 years

Table 39: Criteria for Economic profitability in the basic situation with Minimum prices

In both cases (Min and Max prices), economic profitability criteria are good. NPV is always positive and Internal rate of return is always high than the economic discount rate of 3%.

Altern consol - Economic - Max Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	-5.394.651.942,56 RWF	na	-1,69	2 years
Hypothesis 2	11.757.364.428,95 RWF	21%	3,69	2 years
Hypothesis 3	28.909.380.800,45 RWF	38%	9,08	2 years

Table 40: Criteria for Economic profitability in the alternative situation with Maximum prices

²⁷ For the economic evaluation, we will assume that the rate of actualization (3%) will be the discounted rate of the National Bank of Rwanda (12%) less the annual 2009 inflation rate (9%).

Altern consol - Economic - Min Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	-7.708.481.935,81 RWF	na	-2,42	3 years
Hypothesis 2	3.992.554.666,58 RWF	11%	1,25	3 years
Hypothesis 3	15.693.591.268,98 RWF	27%	4,93	3 years

Table 41: Criteria for Economic profitability in the alternative situation with Minimum prices

The alternative situation is economically less profitable than the initial situation. Indeed, in the case of Hypothesis 1, NPVs are negative and IRR are bad.

The second alternative situation gives the following results:

Progressive - Economic - Max Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	11.345.962.506,19 RWF	27%	6,52	2 years
Hypothesis 2	32.085.750.388,39 RWF	50%	18,43	2 years
Hypothesis 3	52.825.538.270,60 RWF	67%	30,34	2 years

Progressive - Economic - Min Prices	NPV	IRR	NPV/I	Payback period
Hypothesis 1	4.121.139.340,68 RWF	13%	2,37	2 years
Hypothesis 2	18.184.064.530,74 RWF	32%	10,44	2 years
Hypothesis 3	32.246.989.720,79 RWF	46%	18,52	2 years

According to these results, this situation is economically profitable and profitability criteria are very good.

7 Overall assessment

7.1 Strengths and weaknesses

The intervention has very positive impacts on job creation and future income prospectives. Balanced with few weaknesses, the most important being the demand for extension service still to be organized (and funded) at the MINAGRI level.

Strengths	Weaknesses
Erosion mitigation efficacy	Fight against erosion mitigation limited to one technique

Strengths	Weaknesses
Impact on productivity	No monitoring resulting in very poor capitalization
Costs structure of the intervention	Appropriation
Procedures	Need to strengthen extension, to develop accompaniment facilities / structures, including banking facilities.
Labour force procedure payments	Need to monitor soil fertility , do provide soil analysis facilities
	Associations are not in place at the end of the works

Table 42: Strengths and weaknesses

Direct employment has been discussed in chapter 4.5.1 Life conditions page 48. The positive impact is linked to the procedure for works organization (service contract and direct payment by district) and payment procedure itself (bank transfer on individual's bank account).

The various impacts are not monitored by the project but previous same experience on another project ²⁸ showed very positive impacts.

On terraced lands, erosion is stopped. But the impact is limited to the terraces, leaving exposed the thousands hectares still untouched. The cost per hectare is unaffordable, the works can not be replicated and extended to all the suitable places.

Monitoring does not exist in this project. It would be interesting to have access to labour force weekly productivity. And in the case of this project, to be in position to compare TIG and general population. To put original slope in relation with labour force requirements and productivity, to link with soil nature, ... those figures are not available. As regard to productivity increase, no baseline is available. Comparative tests of fertilization should be made to identify the limiting factor on progressive terraces and isolate the terracing factor on bench terraces. An so on !

Associations are not yet in place and the time to organize them is very limited within the project time frame. Most probably, the task will remain to MINAGRI, ministry which is not ready and staffed for same.

This issue leads to the major weakness identified, the need to provide an professional environment to farmers, with good extension service, procurements organized, credit facilities, ... Productivity and production will only be reached if the conditions for producers are good enough : access to knowledge, access to good quality seeds, access to fertilizers, access to lime, access to adequate advices,

²⁸ Demobilisation commission RDRC, 2005-2008, CBR project.

easy access to markets, good prices on the markets, confidence in banking facilities, ...

7.2 Overall assessment according to Ecofin point of view

Criteria	Questions	Answers
Efficiency	<p>Is the project using a minimum of resources and are resources used efficiently?</p> <p>Are the returns of the project adequate (only for projects with tangible benefits)?</p>	<p>Yes, the project is financially and economically efficient. IRR are higher than discount rates and the NPVs are positive.</p> <p>Nevertheless, it is important to note that the project is sensitive to agricultural sales prices.</p> <p>Only one alternative situation is not financially and economically efficient with negative NPVs : it is the alternative situation under Hypothesis 1 (for more details, see previous sections).</p>
Sustainability	<p>Do the main stakeholders face solvency problems during the implementation of the project?</p> <p>Can the main stakeholders meet the recurrent costs after the end of the project?</p> <p>Is the project competitive (hence viable) internationally?</p>	<p>Financial Analysis of the main stakeholders shows that the project is sustainable</p> <p>Recurrent costs are met by stakeholders at the end of the project.</p> <p>Yes, the economic analysis shows it.</p>

8 Conclusions et recommandations

8.1 Erosion mitigation

Bench terraces are not the only technical response to soil erosion but has to be seen as one among others in soil and water conservation techniques.

Terraces cost per hectare is very high – around EUR 1500 per hectare, more or less RWF 1 200 000/ha.

If investing in bench terraces would be the only technique to fight erosion, to have a significant impact, to cover a significant part of arable lands protected (as indicators are tuned), this would demand an overall budget out of reach of national budget, even backed up with sectoral budget support.

8.2 Agricultural production

Within the present evaluation exercise ²⁹, the “terraces” factor can not be isolated from fertilization factor and other inputs. Therefore, it is not possible to conclude to the necessity to engage in terracing works.

Terracing implies and demands a complete agricultural reform with compulsory intensification.

The soil fertility issue is a challenge, presently managed through chemical fertilizers but the sustainable solution would be an integration of agro-forestry and cattle rearing to manage organic fertilization.

After the present project and other terracing works, including old progressive terraces, the country has already a large area covered. Some terraces (radical and progressive) are not been cultivated or are not highly productive.

To increase the agricultural production, in whole, Rwanda should also put efforts on already terraced lands and propose adequate intensification programmes on those lands.

8.3 TIG

Employing tigestes is a policy decision and is not based on decisive good or bad experience.

Technically, works are and have to be, of the same quality. Works quality is the responsibility of the service provider and the controller of works. Workers conditions

²⁹ Research has to be run to isolate the “terraces” factor, ISAR should be invited to look at this issue.

or particulars could imply more or less time to complete the bulk of works and thus have different costs. But the quality should not be an issue.

Economically, direct population interest is to be employed on the sites while government's interests are :

- to allocate the right amount of funds to works, to compensate for the loss of harvest and revenues during works, to motivate the workforce, and to satisfy a seek for a positive side effects on local economies
- but also to manage the justice process as a whole, in the interest of the population.

For more information on this issue, please refer to §9.2.9 “TIG and tigistes“ page 100.

Not being a technical issue nor a way to save money, recourse to tigistes is only a political issue.

8.4 ECOFIN analysis

The ECOFIN analysis shows excellent results. As illustrated by the profitability criteria measured in the EcoFin analysis: the Net Present Value, the Internal Rate of Return and the Payback Period – are all positive and have values showing that the project is profitable.

Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.295.458.757,92 RWF	29%	2,1	2 years	11.015.005.251,21 RWF	23%	3,46	2 years
Hypothesis 2	17.833.916.303,48 RWF	53%	5,95	2 years	32.455.025.715,59 RWF	46%	10,2	2 years
Hypothesis 3	29.372.373.849,03 RWF	70%	9,79	2 years	53.895.046.179,97 RWF	63%	16,9	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.212.116.934,03 RWF	17%	0,74	2 years	3.539.087.118,55 RWF	10%	1,11	2 years
Hypothesis 2	9.988.182.025,94 RWF	36%	3,33	2 years	18.051.149.923,64 RWF	29%	5,67	2 years
Hypothesis 3	17.764.247.117,84 RWF	51%	5,92	2 years	32.563.212.728,73 RWF	42%	10,2	2 years

While the project is efficient financially and economically, the sensitivity to the agricultural sales prices is significant. The analysis has been done taking into account results measured, on one hand, with the average minimum sales prices and, on the second hand with the average maximum sales prices.

For the ‘with project’ and the ‘without project’ situations, three productivity scenarii have been tested and results of the analysis are good.

Moreover, all results show that the project is financially and economically sustainable.

Results have also been compared to an alternative situation of the project. The variant tested was the one in which firms are contracted to work in the terraces instead of smallholders. This alternative situation shows a lower financial and economical efficiency due the lack of quality of work provided by such companies and the lack of direct revenue distributed to the farmers during the investment period. Under the first hypothesis tested, the NPV of this situation are negative and the IRR are bad.

Financial					Economic			
Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	-2.853.761.490,30 RWF	na	-0,95	3 years	-5.394.651.942,56 RWF	na	-1,69	2 years
Hypothesis 2	6.377.004.546,15 RWF	26%	2,13	3 years	11.757.364.428,95 RWF	21%	3,69	2 years
Hypothesis 3	15.607.770.582,59 RWF	43%	5,2	3 years	28.909.380.800,45 RWF	38%	9,08	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	-3.953.334.235,88 RWF	na	-1,32	4 years	-7.708.481.935,81 RWF	na	-2,42	3 years
Hypothesis 2	2.343.857.238,36 RWF	17%	0,78	3 years	3.992.554.666,58 RWF	11%	1,25	3 years
Hypothesis 3	8.641.048.712,60 RWF	33%	2,88	3 years	15.693.591.268,98 RWF	27%	4,93	3 years

Another alternative as tested. This alternative situation is the one in which it is not radical terraces situation but a progressive terraces situation. As shown by the results of the EcoFin analysis, this alternative situation gives better results than the “basic” situation (radical terraces). It means that it would be more relevant for the government to strengthen progressive terraces projects where it is technically possible and relevant.

Max Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	6.622.166.655,10 RWF	34%	4,04	2 years	11.345.962.506,19 RWF	27%	6,52	2 years
Hypothesis 2	17.622.919.985,89 RWF	58%	10,74	2 years	32.085.750.388,39 RWF	50%	18,43	2 years
Hypothesis 3	28.623.673.316,67 RWF	76%	17,44	2 years	52.825.538.270,60 RWF	67%	30,34	2 years

Min Prices	NPV	IRR	NPV/I	Payback period	NPV	IRR	NPV/I	Payback period
Hypothesis 1	2.733.565.455,43 RWF	21%	1,67	2 years	4.121.139.340,68 RWF	13%	2,37	2 years
Hypothesis 2	10.166.666.956,79 RWF	41%	6,20	2 years	18.184.064.530,74 RWF	32%	10,44	2 years
Hypothesis 3	17.599.768.458,15 RWF	56%	10,73	2 years	32.246.989.720,79 RWF	46%	18,52	2 years

“Évaluation, étude d’impact et analyse Ecofin du
Programme de terrassement radical Rwanda COM STABEX 96-99”
Final Report – August 2010

9 Annexes.

9.1 Terms of reference

LOT N° 1 / DEMANDE N° 2009/225794/1 TERMES DE REFERENCE SPECIFIQUES

Evaluation, étude d'impacts et analyse ECOFIN de la composante de
terrassement radical du programme STABEX

Conventions de financement - RWANDA - COM STABEX 96-99

[Terms of reference are initially in French, they are not translated here under. Country and project presentation, experts profiles and mission details are removed from this section.]

4. DESCRIPTION DE LA PRESTATION ATTENDUE

➤ **Objectifs globaux**

Il s'agit de réaliser une évaluation et une étude d'impact incluant une analyse économique et financière de la composante "terrasses radicales" du COM STABEX 96-99 décrite ci-avant.

➤ **Objectifs spécifiques**

A/ en ce qui concerne l'évaluation

Il s'agit d'évaluer les effets et impacts de la réalisation du programme, de dégager les enseignements et leçons que l'on peut capitaliser de l'approche retenue et de faire des recommandations en vue d'améliorer la programmation et la mise en œuvre des futures interventions à l'échelle nationale.

Cette évaluation sera également l'occasion de définir des référentiels à l'usage des Districts, notamment dans l'optique de la mise en œuvre du 10^{ème} FED qui comprend un appui budgétaire à l'agriculture décentralisée de 20 Millions d'euros.

L'analyse des consultants devra porter sur les cinq critères clés d'évaluation (pertinence, efficacité, impact, viabilité) et les différents éléments du cadre logique.

L'évaluation servira également à vérifier si la mise en œuvre du programme répond bien aux besoins des collectivités locales et des bénéficiaires ainsi qu'aux politiques nationales de lutte contre la pauvreté (EDPRS), de développement agricole (SPAT 2) et d'environnement, d'appui au processus de décentralisation et de réconciliation nationale.

B/ en ce qui concerne l'étude des impacts et l'analyse économique et financière

L'étude et l'analyse porteront sur les travaux réalisés dans l'ensemble des 6 Districts en intégrant, l'ensemble des impacts et externalités, monétarisables ou non, du programme.

Une analyse coût/bénéfice avec calcul des taux de rentabilité interne financier et éventuellement économique sera réalisée au niveau des différentes catégories d'acteurs jugées pertinentes. Les retombées du programme en termes économiques et sociaux, mais également fonciers et environnementaux, seront estimées. L'analyse comparera également les bénéfices de l'approche utilisée (HIMO en régie directe par le District) par rapport à une approche contractuelle avec des prestataires de service ainsi que par rapport à une variante

technique consistant en un aménagement en terrasses progressives. D'autres variantes pourront également être prises en compte si jugées pertinentes par l'équipe de consultants.

In fine, l'exercice devra conduire à estimer l'intérêt pour le gouvernement Rwandais de répliquer les opérations à l'échelle nationale, sur l'ensemble des superficies potentiellement aménageables de son territoire. Une désagrégation régionale en fonction du potentiel respectif des différentes zones agro-écologiques du pays complètera l'exercice.

➤ Services demandés et résultats attendus

A/ en ce qui concerne l'évaluation

Comme déjà mentionné, l'analyse du consultant devra porter sur les cinq critères clés d'évaluation (pertinence, efficacité, efficacie, impact, viabilité) et les différents éléments des cadres logiques.

(i) Evaluation de la pertinence du programme

Il conviendra d'évaluer la pertinence du programme auprès de chacune des catégories d'acteurs impliquée, avec un accent particulier sur les bénéficiaires finaux (propriétaires/utilisateurs des terrains aménagés). La mission analysera la cohérence et la contribution du programme aux politiques du gouvernement en matière de réduction de la pauvreté, de développement durable et d'environnement, d'intégration et de réconciliation sociales,... . Il analysera la qualité du cadre logique : clarté et cohérence interne des objectifs globaux, de l'objectif spécifique et des résultats énoncés, pertinence des indicateurs objectivement vérifiables (IOVs).

La mission devra également évaluer la pertinence du programme par rapport aux objectifs de la Commission, en particulier au niveau de ses stratégies de développement rural et environnementale.

(ii) Evaluation de l'efficacité du programme

La mission devra évaluer l'efficacité du programme du point de vue de la structure et des procédures de mise en œuvre du programme. Il conviendra de déterminer dans quelle mesure les résultats ont été à la hauteur des ressources, moyens humains et financiers mobilisés par les acteurs et si ces ressources ont été utilisées de manière performante et économe. La méthodologie de mise en œuvre et la réalisation du programme seront évaluées sous les aspects suivants:

- rôle des différents intervenants et relations entre eux;
- moyens et analyse des coûts : adéquation des moyens mis en place, en quantité et en qualité; adéquation des ressources humaines utilisées; appréciation des coûts;
- modalités et procédures d'exécution: adéquation des procédures mises en place aux différents niveaux en vue d'atteindre rapidement des résultats : disponibilité rapide des fonds, passations des marchés, modalités de paiement ;
- implication des bénéficiaires et des différents intervenants;
- maîtrise de l'ensemble de l'exécution du programme : calendrier de mise en œuvre, adéquation aux problèmes rencontrés y compris la cause de ces problèmes.

La mission devra également établir des comparaisons avec les programmes et leurs modes d'intervention mis en œuvre par d'autres institutions ou organismes (RADA, PAM, FAO, KFW, PDL-HIMO, ONGs,...).

(iii) Evaluation de l'efficacité du programme

La mission procédera à une évaluation classique basée sur les indicateurs objectivement vérifiables tels qu'ils figurent dans les documents régissant le programme (réalisations

physiques, nombre de bénéficiaires, etc). Il faudra également évaluer l'efficacité du programme par rapport à la situation du pays, et plus particulièrement:

- si le programme répond aux besoins des collectivités,
- si le programme cadre avec la politique nationale de développement,
- si le programme a ouvert des nouvelles perspectives pour les catégories les plus pauvres,
- si les réalisations respectent les prévisions,
- si le rapport coût-réalisation est correct,
- si la qualité de la réalisation est acceptable,

(iv) Evaluation de l'impact du programme

La mission devra décrire et évaluer les impacts du programme, bénéfiques ou négatifs et définir dans quelle mesure le projet aura directement contribué à la réalisation des objectifs globaux.

D’un point de vue technique, la mission répondra aux questions suivantes: les aménagements réalisés répondent-ils aux problèmes rencontrés? Quels sont leurs impacts agronomiques, environnementaux et fonciers?

Les éléments chiffrés sur l’impact économique et social du programme sur les travailleurs et bénéficiaires seront estimés (cf analyse économique et financière). La masse salariale versée et les revenus générés par les activités de mise en valeur des terrasses radicales seront analysés sous l'angle de la réduction de la pauvreté et des éventuels effets multiplicateurs générés, notamment par la création d'activités génératrices de revenus.

Enfin, dans le contexte particulier du Rwanda, l’impact du programme sur les travailleurs et les bénéficiaires en termes de réconciliation nationale sera évalué.

La mission devra proposer une grille d’analyse permettant de répondre à un éventail le plus large possible de questions, notamment :

- quel est l'impact sur la vie sociale du milieu ?
- quel est l'impact sur la vie de la collectivité ?
- quel est l'impact du projet en termes de réconciliation?
- quelles sont les améliorations aux conditions de vie ?
- quelles améliorations aux capacités organisationnelles des collectivités sont apportées ?
- quel appui est apporté aux gouvernements locaux?
- quel appui est apporté à la politique nationale de développement et de décentralisation?
- y a-t-il des dynamiques engendrées par les actions ?
- les techniques de réalisation sont-elles appropriées au milieu et aux bénéficiaires ?

(v) Evaluation de la viabilité des actions

La mission identifiera les aspects de viabilité les plus pertinents, une attention particulière sera donnée à :

- la durabilité de l'impact des aménagements en termes d'intensification agricoles et de lutte contre l'érosion;
- les contraintes telles que les problèmes fonciers ou de faire valoir sur les terres, pouvant affecter la durabilité des résultats;

- le degré d’appropriation des résultats du programme par des bénéficiaires (implication active, prise en charge responsable, prise en charge des frais récurrents liés à l’intensification agricole, etc.)
 - l’analyse des bénéfices et des impacts qui pourront se produire à plus long terme
- B/ Etude d’impacts

La mission identifiera les impacts engendrés par le programme à différents niveaux :

- Estimation des bénéfices agronomiques : gains liés aux augmentations de rendements, plus values découlant des nouvelles spéculations culturales, effets induits de l’agroforesterie sur des activités connexes, impact sur les activités d’élevage,
- Impact environnemental : Définition et quantification (en nature) des différents bénéfices environnementaux engendrés par les aménagements du programme.
- Avantages socio-économiques: Effets du programme sur la cohésion sociale, sur les mécanismes de tenure foncière et le marché de la terre, sur l’organisation des producteurs et leur accès aux marchés de commercialisation de la production agricole, ...
- Amélioration des capacités: impacts des programmes de formation et de la mise en œuvre (learning by doing) sur les bénéficiaires finaux, les organisations en charge de l’encadrement technique, les services bancaires, les services techniques et administratifs des Districts et des secteurs;

L’étude d’impact capitalisera les effets positifs et négatifs du programme et fera des recommandations en vue de leur optimisation dans le cadre d’une réplification à l’échelle du territoire.

C/ Etude technique

La mission procèdera à une analyse critique du programme qui portera aussi bien sur les techniques d’aménagement de viabilisation et de valorisation des terrasses employées que sur les méthodologies organisationnelles visant à leur exploitation optimale.

Elle analysera notamment les aspects :

- conduite des travaux par la population locale vs utilisation du TIG (Travail d’Intérêt Général)
- évaluation des dispositifs de supervision et d’encadrement;
- avantage/inconvénient des modalités de paiement (en cash, via compte bancaire);
- implication des services techniques et administratifs des districts et des secteurs et évaluation de leur capacité, notamment en termes d’engagement (procurement), de contractualisation et de gestion des fonds;
- pertinence et efficacité de la dynamique associative, au niveau de l’aménagement et de la valorisation des terrasses;
- pertinence des itinéraires techniques, notamment par rapports aux techniques d’aménagement, de viabilisation et de valorisation (choix des cultures);
- ...

C/ Analyse économique et financière

L’analyse économique et financière suivra la méthodologie classique :

- Identification des acteurs devant faire l’objet de l’analyse financière et/ou économique (district, fournisseurs, main d’œuvre, exploitants individuels, coopératives, ...).
- Définition des référentiels (situation sans projet, taux d’actualisation,...)

- Proposition de variantes (mise en œuvre contractualisée avec entreprises, variantes techniques,...)
- Elaboration des comptes d'exploitation individuels et consolidés
- Intégration des impacts ; une attention particulière sera apportée aux bénéfices environnementaux dans la mesure où ils seront quantifiables monétairement
- Calcul des indicateurs (durée retour sur investissement, VAN, TIRF, TIRE,...)
- Comparaison avec variante(s)
- Conclusions des analyses

9.2 Detailed evaluation method including:

9.2.1 Difficulties

The evaluation comes a little bit too early in project's life : latest commitments are to be taken in early April 2010, very first harvests are coming, etc. not giving any trends.

The main constraint for evaluation and economic and financial analysis is that the project does not have a internal monitoring nor a reporting system³⁰. Thus, information like actual expenses were not available to the mission and the mission had to work on budget figures.

District officers seem to be overbooked and are not bringing expertise to the works, they are not gaining experience from the works. Contracted operators' reports [OSTR] are only factual³¹ (and not compiled) and are of poor interest to extract relevant information and prepare following intervention of same kind.

9.2.2 Detail of tools and analyses

30 In fact, there are standard forms for reports produced by RADA, but only to follow the cost estimates, not the technical aspects.

31 Example : a very long list of each individual terraces, with area, beneficiary, length of retaining walls, ...

Detailed breakdown of districts cost estimates.

	Burera	Gasabo	Karongi	Nyabihu	Nyaruguru	Rulindo	Moyennes	%
TRAVAUX DE TERRASSES	750 777	638 111	751 422	1 506 675	752 504	658 164	842942	51
Travaux HIMO classique (20 % de la superficie)		150 428				156 977	153703	9
Travaux HIMO classique capitas						10 774	10774	1
Travaux avec TIGISTES (80% de la superf.)		487 683				490 413	489048	29
FOURNITURES	519 552	555 847	479 350	441 372	518 698	499 293	502352	30
Petit matériel	44 145	48 543	33 216	40 000	41 183	57 342	44072	3
Semences	60 000	60 054	60 968	48 500	60 000	57 109	57772	3
Chaux agricole	79 097	62 866	70 968	57 680	83 115	74 988	71452	4
Matière organique	220 645	274 555	196 960	184 000	225 600	210 661	218737	13
NPK	115 665	109 829	116 160	111 192	108 800	99 192	110140	7
MATERIEL VEGETAL	50 109	50 894	50 109	37 896	50 093	50 789	48315	3
Fourniture et plantation des herbes fixatrices du sol	16 305	16 304	16 294	21 000	16 289	17 193	17231	1
Fourniture et plantation des arbres et arbustes	33 804	34 591	33 804	16 896	33 804	33 597	31083	2
OSTR	140 151	150 000	135 968	141 777	148 168	150 000	144344	9
Elaboration du plan d'aménagement + topo	0	0	0	0	0	0	0	0
Main d'œuvre : recrutement, organisation, formation, paie	0	0	0	0	0	0	0	0
Encadrement de la main d'œuvre	0	150 000	0	0	0	0	30000	2
FONCTIONNEMENT DISTRICT	0	0	0	0	0	0	0	0
PERSONNEL	20 968	27 161	20 968	30 952	21 667	26 562	24713	1
Régisseur	10 484	10 484	10 484	15 476	10 833	10 252	11336	1
Comptable	10 484	10 484	10 484	15 476	10 833	10 252	11336	1
Gestionnaire de stock et matériels projet		6 194				6 057	6125	0
EQUIPEMENTS ET FOURNITURES BUREAUX	12 903	12 903	14 516	19 048	14 333	12 618	14387	1
Ordinateur et accessoires	5 161	5 161	5 161	7 619	5 333	5 047	5581	0
Consommables	7 742	7 742	968	11 429	1 000	7 571	6075	0
			6 452		8 000		7226	0
			645				645	0

	Burera	Gasabo	Karongi	Nyabihu	Nyaruguru	Rulindo	Moyennes	%
COMMUNICATION ET TRANSPORT	15 039	14 184	18 329	24 486	17 440	16 120	17600	1
Carburant pour Agronomes des Secteurs	8 226	3 290	11 516	14 429	6 300	4 826	8098	0
Contact par téléphone	3 097	3 097	3 097	4 571	3 200	3 028	3348	0
Connections à l'internet		484	3 716	4 286	500	334	1864	0
Abonnement internet		2 613			3 600	3 312	3175	0
Frais de mission	3 716	4 684			3 840	4 618	4215	0
PASSATION DES MARCHES	2 903	3 581	3 871	4 286	4 000	2 839	3580	0
Publication des DAO	2 903	3 387	1 935	4 286	4 000	2 839	3225	0
VISIBILITE	16 779	8 387	12 903		11 667	15 773	13102	1
Visibilité	16 779	8 387	12 903	11 905	11 667	15 773	12902	1
INSTALLATION DES TIGISTES		38 968				51 356	45162	3
Sheetings		25 806				18 927	22367	1
Sticks		10 968				8 833	9900	1
Clous		2 194				1 514	1854	0
Nattes, couvertures						22 082	22082	1
TOTAL	1 529 179	1 500 037	1 501 468	2 218 396	1 538 570	1 474 051	1626950	98
IMPREVUS (5 %)	12 489	35 977	29 223	42 091	49 369	30 355	33251	2
TOTAL GENERAL DU DP								10
	1 541 668	1 536 014	1 530 691	2 260 487	1 587 938	1 504 405	1660201	0
hl/ha	990	991	991	1036	963	1003	996	

The table above is made according to budget, not to actual data after completion, actual data which were not available at the time of the evaluation nor during the reporting time.

9.2.3 List of interviews

Name	Position
Justine Gatsinzi	CDF
Macumi Jean de Dieu	CDF
Nkebarera Come	District Burera
Alexis Tarzan	District Burera – accountant
Nzeymana Theogène	District Burera – ES
Kamanzi Raymond	District Burera – ES
Nomero Emmanuel	District Burera – TR committee
Kanyabiko Félicien	District Burera – TR committee
? Faustin ?	District Gasabo - Agronome
Joseph Kabanda	District Gasabo – ES Rutunga sector
Eric Habyiarimana	District Karongi
Jean Damascène Kabila	District Karongi
Sébastien	District Karongi
Yves Bernard Ningobili	District Karongi
Jean Pierre Nyirimanzi	District Nyabihu –
Franck Kobukwewe	District Nyabihu – ES
Egide Kayitasire	District Nyaruguru
Nelson Muhayimana	District Nyaruguru
Felix Sibomana	District Nyaruguru – Mayor
Richard Katarwa	District Nyaruguru – Munini sector – ES
Justus Kangwagye	District Rulindo
Fred Goericke	DWHH
Florien NtakiruTimana	ECOCAS (entreprise)
Jean Pierre Dekens	Eu Delegation
Pascal Ledroit	Eu Delegation
Michel Arrion	Eu Delegation / Ambassadeur
Henk Breman	IFDC director
Claver Ngaboyisonga	ISAR -
Sylvie Karasira	ON
Guy Kalisa	ON
Anastase Gahutu	OSTR UTSE
Vénuste Ruhigana	RADA – TR Stabex
Ruhindanisheja Polycarpe	RADA – TR Stabex
Fabien Ntilivamunda	RADA / engrais
Wilbert Husabyisa	RADA / programme tubercules
Sendege Norbert	RADA act. Director General
Nabahire Anastase	Secretariat Exécutif du comité national de TIG. SEA
Twizere Jean de Dieu	STABEX, AT

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Table 43: Bibliography

9.2.5 Detailed costs per hectare (costs estimates)

	Burera	Gasabo	Karongi	Nyabihu	Nyaruguru	Rulindo	Moyennes	%
TRAVAUX DE CONSTRUCTION DES TERRASSES	750 777	638 111	751 422	1 506 675	752 504	658 164	842942	51
Travaux HIMO classique (20 % de la superficie)		150 428				156 977	153703	9
Travaux HIMO classique capitas						10 774	10774	1
Travaux avec TIGISTES (80% de la superf.)		487 683				490 413	489048	29
FOURNITURES MATERIEL ET INTRANTS AGRICOLES	519 552	555 847	479 350	441 372	518 698	499 293	502352	30
Petit matériel	44 145	48 543	33 216	40 000	41 183	57 342	44072	3
Semences	60 000	60 054	60 968	48 500	60 000	57 109	57772	3
Chaux agricole	79 097	62 866	70 968	57 680	83 115	74 988	71452	4
Matière organique	220 645	274 555	196 960	184 000	225 600	210 661	218737	13
NPK	115 665	109 829	116 160	111 192	108 800	99 192	110140	7
MATERIEL VEGETAUX POUR VIABILISATION DES TALUS DES TERRASSES	50 109	50 894	50 109	37 896	50 093	50 789	48315	3
Fourniture et plantation des herbes fixatrices du sol	16 305	16 304	16 294	21 000	16 289	17 193	17231	1
Fourniture et plantation des arbres et arbustes	33 804	34 591	33 804	16 896	33 804	33 597	31083	2
ENCADREMENT TECHN. ET ORGANISATIONNEL - OSTR	140 151	150 000	135 968	141 777	148 168	150 000	144344	9
Elaboration du plan d'aménagement + topo	0	0	0	0	0	0	0	0
Main d'œuvre : recrutement, organisation, formation, paie	0	0	0	0	0	0	0	0
Encadrement technique, organisationnel et administratif de la main d'œuvre	0	150 000	0		0	0	30000	2
FONCTIONNEMENT DISTRICT	0	0	0		0	0	0	0
PERSONNEL	20 968	27 161	20 968	30 952	21 667	26 562	24713	1
Régisseur	10 484	10 484	10 484	15 476	10 833	10 252	11336	1
Comptable	10 484	10 484	10 484	15 476	10 833	10 252	11336	1
Gestionnaire de stock et matériels projet		6 194				6 057	6125	0
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			645				645	0
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Contact par téléphone	3 097	3 097	3 097	4 571	3 200	3 028	3348	0
Connexions à l'internet		484	3 716	4 286	500	334	1864	0
Abonnement internet		2 613			3 600	3 312	3175	0
Frais de mission	3 716	4 684			3 840	4 618	4215	0
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Sheetings		25 806				18 927	22367	1
Sticks		10 968				8 833	9900	1
Clous		2 194				1 514	1854	0
Nattes, couvertures						22 082	22082	1
TOTAL	1 529 179	1 500 037	1 501 468	2 218 396	1 538 570	1 474 051	1626950	98
IMPREVUS (5 %)	12 489	35 977	29 223	42 091	49 369	30 355	33251	2
TOTAL GENERAL DU DP	1 541 668	1 536 014	1 530 691	2 260 487	1 587 938	1 504 405	1660201	100

The table above is made according to budget, not to actual data after completion, actual data which were not available at the time of the evaluation.

9.2.6 HIMO norms for terraces works

These two pages are extracted from “République Rwandaise, Ministère des Travaux Publics des Transports et Communications (MINITRACO). Guide pratique pour la préparation et la mise en œuvre de projets à haute intensité de main d’œuvre”.

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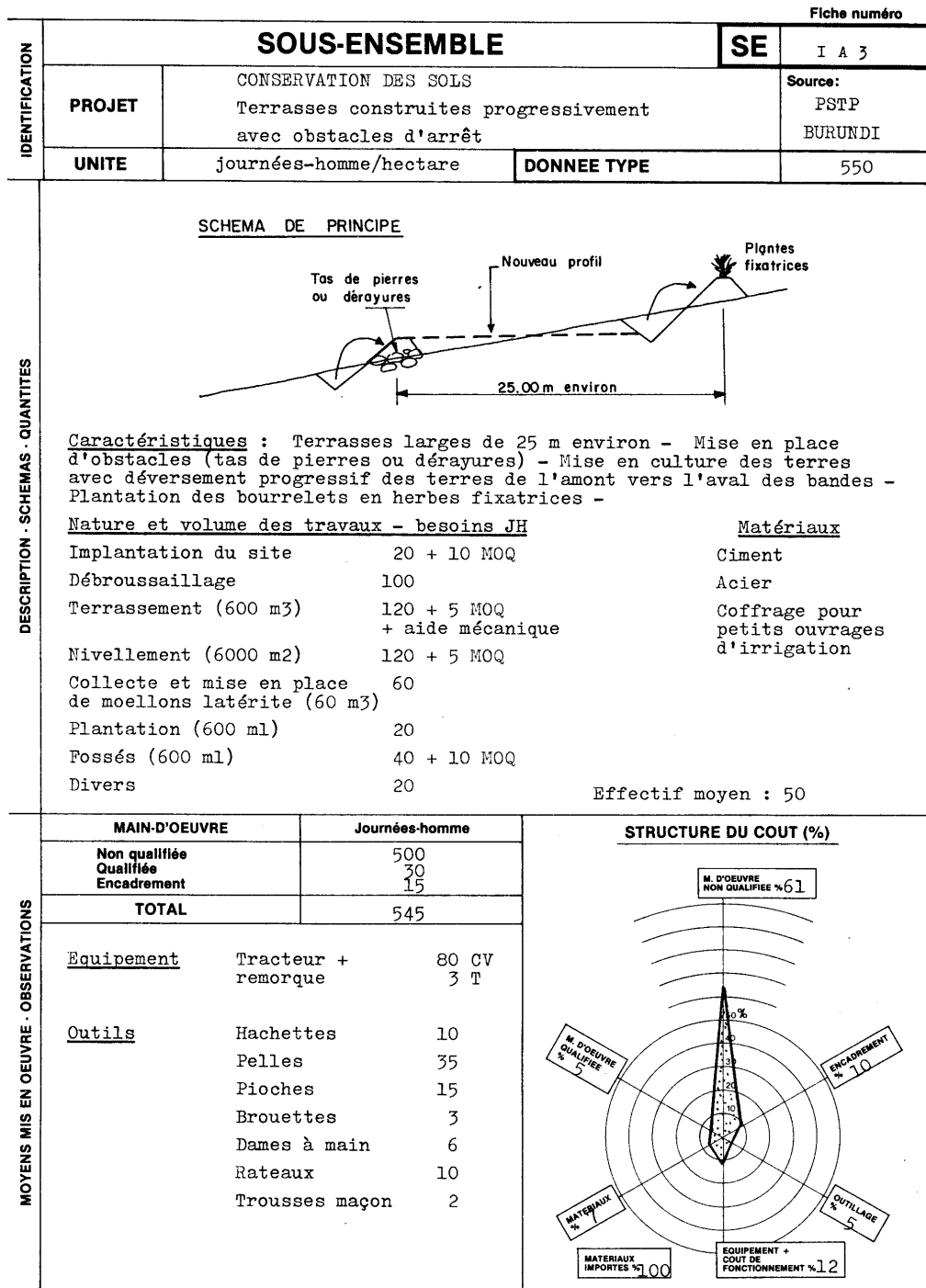


Illustration 8: progressive terraces : project design figures

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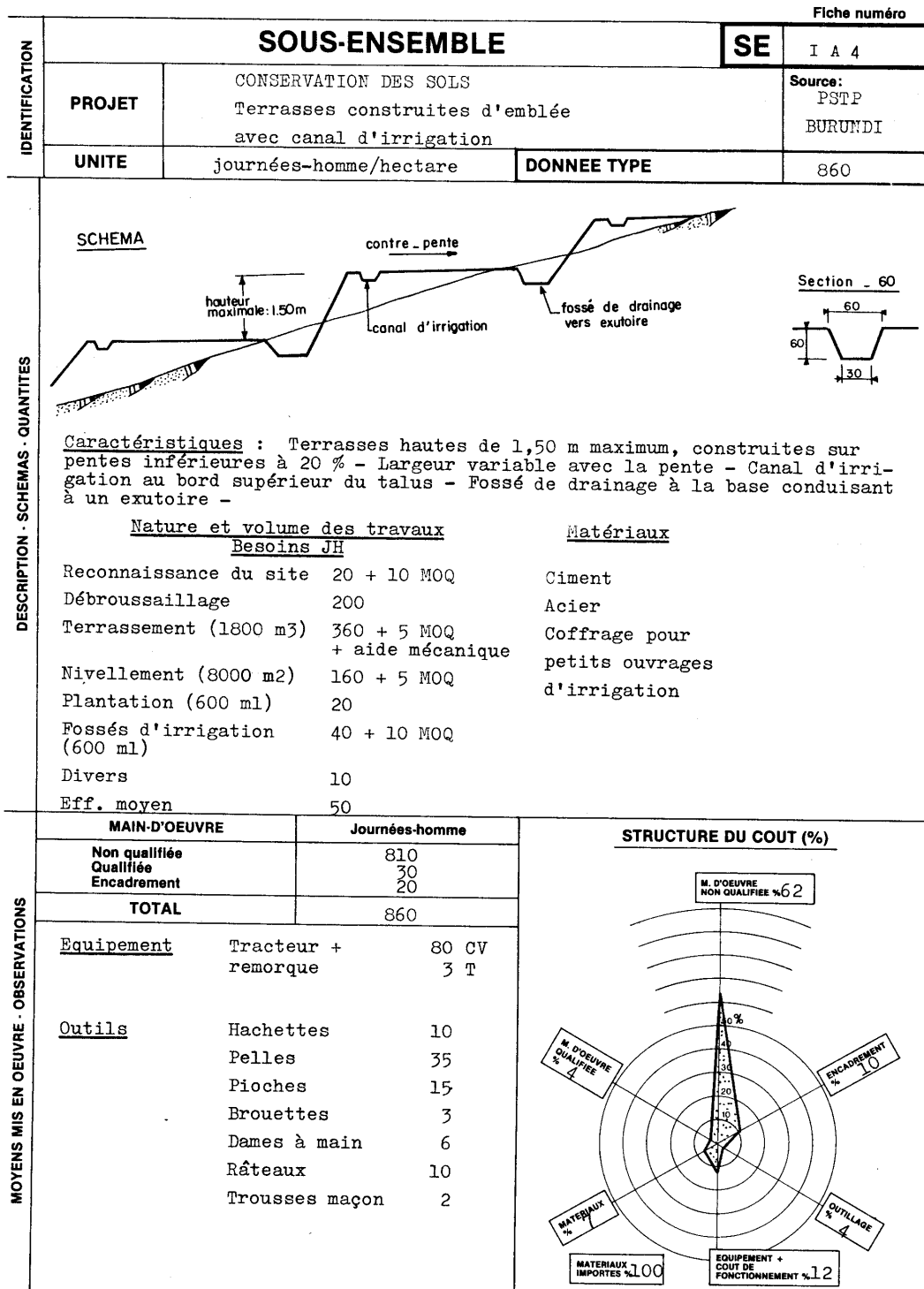


Illustration 9: Bench terraces : project design figures

9.2.7 CDF/PDL-HIMO contracts

CDF did fund some bench terraces works, with works contracts procedure : “marché à prix unitaire, fermes et non révisables”.

Cost estimate details were found back at EU delegation office. Concerning works contracts, unit prices are including company margins and it's no longer possible to identify precisely the money devoted to the population (direct income).

Contrat

Type de Marché : marché à prix unitaire, fermes et non révisables

3. Les travaux consistent à :

- Aménagement et stabilisation des terrasses radicales sur une superficie de 10 ha ;
- Plantation des herbes fixatrices sur les talus des terrasses radicales;

Vérification des travaux par le fonctionnaire dirigeant sur terrain, selon la grille suivante.

N	Opérations	Spécifications techniques
1	Piquetage	Cette opération consiste à matérialiser sur terrain la largeur des futures terrasses radicales. Le piquetage se fait suivant les courbes de niveau avec une largeur moyenne de 5 m
2	Enlèvement des mottes de terre	C’est une opération qui consiste à couper des mottes de terre de 40 cm de long et 30 cm de largeur qui serviront à la construction des talus avec des mottes de terre.
3	Enlèvement de la terre arable	En construction des terrasses il est important d’enlever la couche arable ou l’horizon A de la surface sur la quelle on veut créer une terrasse radicale pour pouvoir conserver la fertilité naturelle de ce sol.
4	Creusement du sous-sol, remise de la terre arable et égalisation	Le creusement du sous-sol permet d’ameublir cette couche du sol pour la rendre perméable à l’eau, à l’air et aux racines des cultures
5	Creusement des Fossés en amont des terrasses radicales	Les Fossés qui seront creusés en amont des terrasses radicales ont pour mission de retenir l’eau de ruissellement. Ces fossés séparés par une distance de 50 cm, sont longs de 4 m, larges de 40 cm et profonds de 50 cm.
6	Construction des talus et son renforcement	Sur une terrasse radicale on trouve 2 types de talus : le talus sans mottes obtenu après le creusement du sous-sol et le talus confectionné avec des mottes de terre qui est constitué par une superposition des mottes et de la terre du sous-sol
7	Etablissement des escaliers	Entre les terrasses radicales, si nécessaires, il est établis des escaliers avec des trous de rétention d’eau. Les bords de ces escaliers sont plantés de <i>French cemeroun</i> pour les stabiliser. Les escaliers doivent avoir les dimensions qui peuvent permettre de les escalader facilement même si c’est pendant la saison des pluies.

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N	Opérations	Spécifications techniques
8	Plantation des herbes fixatrices du sol	Il s’agit des boutures des roseaux de l’espèce <i>french cameroun</i> plantées sur 2 rangées sur les talus des terrasses radicales avec un écartement de 40 cm entre 2 boutures. Ces boutures de 40 cm chacune doivent avoir 2 nœuds au minimum.
9	Etablissement de la carte	La carte devra montrer l’endroit aménagé. Elle devra être au 1/5000 avec des repères bien visibles

Table 44: CDF works contracts : control / progress of works matrix

Liste des postes du devis estimatif		Bid 1 RWF/ha	Bid 2 RWF/ha	Bid 3 RWF/ha
Installation chantier		2 000	4 000	900
delimitation du site		1 500	1 280	400
Plan d'aménagement		2 000	2 400	200
preparatooin manuel de formation		500	50 000	2 500
formation	j	500	800	35 000
achat des piquets	u	18 750	25 000	5 000
piquetage	ml	60 000	125 000	20 000
creusement des fossés	km	199 800	10 560	1 492
défrichage	m2	50 000	150 000	60 000
appro. Mottes	m3	79 600	199 000	79 600
enlevement terre arable		63 680	31 840	111 440
creusement du sous sol		63 680	39 800	143 280
egalisation		63 680	19 104	111 440
remise terre arable		63 680	35 024	95 520
profils des talus		10 200	30 600	25 500
carte topo dusite	ha	21 068	2 000	2 000
achat des plants		16 224	33 800	20 280
mise en place de splants		6 760	3 380	10 816
achat des boutures		20 315	40 630	40 630
mise en place boutures		12 189	20 315	16 252
gardiennage chantier		10 000	1 280	3 200
rappports		10 000	2 560	373
achat travertin	kg	96 000	120 000	96 000
achat fumier	t	100 000	140 000	280 000
achat NPK	kg	100 000	75 000	100 000
epandage travertin	hj	10 200	13 600	13 600
epandage furmier	hj	10 200	13 600	13 600
epandage npk	hj	10 200	13 600	13 600
achat semences maïs	T	9 000	9 600	340 000
achat poison phyto	kg	27 000	37 500	37 500
	kg	20 000	10 000	25 000
	l	10 000	4 000	13 400
Total cost / ha		1 168 726	1 265 273	1 718 523

Table 45: Cost comparison of 3 bids, 125 ha of bench terraces, 2007

Liste des postes du devis estimatif	Bid 1 RWF/ha	Bid 2 RWF/ha	Bid 3 RWF/ha
Main d'œuvre	713 869	706 703	719 340
Appro. : (all intrants)	417 289	470 530	952 810
Dont intrants	296 000	335 000	476 000
Marges entreprise 30%	214 161	212 011	215 802
%main d'œuvre net	42.76%	39.10%	29.30%

Table 46: Cost structures 3 bids. 125 ha of bench terraces, 2007

Updated in 2010 with an inflation rate of 8%, cost per hectare raises from RWF 1,262,273³² to RWF 1,590,100, which is more or less the cost registered in 2010 by the present STABEX/RADA intervention.

With reserves on the company margin estimated at 30% (personal communication 03/2010), it's interesting to note that direct income to population is significantly lower when works are organised under works contract (compared to service contract and direct recruitment).

CDF LIW projects

Considering a table ³³ summing up labour intensive projects funded by 9th EDF, Netherlands embassy, MINITERE, DEMP, PAFOR, PAPSTA, CDF, CDF/PDL-HIMO, PDL-HIMO/PREPAF, BAD/AIGELAC, MINAGRI, Coop Suisse, KfW/RDRC, RSS/WB and CIDA/PAGOR, one hundred projects were implemented during this period.

From these 100 projects in the years 2003 to 2008, 25 were bench terracing projects covering 4 526 hectares, for an overall cost of RWF 5 100 millions. (RWF 1,130,159 / ha , EUR 1 548 /ha),

		RWF
100 HIMO projects		19 910 647 864
25 bench terraces projects	4526 ha	5 115 100 124

Table 47: 100 CDF projects, overall costs.

Analysing the detailed structures of the costs of bench terraces contracts is not compatible with the time frame of the present mission, and such information is not available.

9.2.8 Detailed cost on RDRC CBR KfW bench terraces in Nyabihu district

During the years 2004 to 2008, the Rwandan Demobilisation and Reintegration Commission [RDRC] was managing a project funded by KfW, aimed to reintegrate

³² The contract was awarded to the company, at the cost of RWF 1 265 273, for a project of 125 ha.

³³ Personal communication . File « Projet TR.xls » received from CDF officer in March 2010.

socially former combatants. To do so, the project was running labour intensive works (many roads rehabilitation, two bench terraces sites, etc.), with a labour force made of 50 % of ex-combatants.

Although works quality was important, the main focus of this project was clearly to reintegrate the ex-combatants amongst the general population by giving them a new start with some on-the-job trainings, a savings account,

This project consists in terracing works in order to convert 200ha of existing fields and natural lands into terraces. According to the study, 160 ha of flat terraces will be realized in the Jomba sector of Nyabihu district.

The study was achieved in April 2008 and the SC held on the 22nd of May approved a budget of RWF 450 millions for the works. Works have started in July with 1.500 workers. This number was increased up to 3 600 persons in order to achieve the works before the end of November 2008.

At the end of March 2009, the remaining activities were related to the provision of agricultural inputs (“french cameroon”, fertilizers, etc); the procurement was underway at District level. These inputs, when procured, should be distributed to the farmers (land owners) while the remaining works should be completed by land owners.

Terrasses Nyabihu	RWF	%
Etudes	500 000	,12
entreprise de gestion de chantier	4 320 000	1,01
Salaires 1000	308 681 009	72,31
matériaux	97 488 748	22,84
outillages	13 770 878	3,23
location stock	40 000	,01
assurance	983 898	,23
frais de gestion des comptes	383 910	,09
autres services	228 500	,05
frais de paiement des salaires	500 000	,12
	426 896 943	

The activity of the creation of bench terraces on 200 ha lasted six months in Nyabihu, with a maximum daily work force of 3600 people. The average work force was of 1543 manday /ha.

Cost / ha (RWF)	2 134 485
Rate € /RWF	700
Cost / ha (€)	3 049

Note

The organization of the works was already quite the one in force for the STABEX/Rada bench terraces project :

- districts are managing the funds, organizing tenders
- works are managed by an specialized operator
- the labour force is paid directly by the district, on bank / micro-finance accounts
- etc.

9.2.9 TIG and tigistes

The Government instituted an extensive community service programme (TIG) (Travaux d’Intérêt Général) which was afforded to countless perpetrators in lieu (in whole or in part) of a prison sentence .³⁴

An initiative borne of ***gacaca*** and known as TIG, les Travaux d’intérêt général, or community service, has become a central feature of genocide justice. It is not, yet, part of Rwanda’s penal code, but the Government is considering its inclusion. Its conception and purpose was spelt out by Anastase Nabahire, the Deputy Executive Secretary of TIG : *After consultation with foreign countries, we learned that this type of sentence is only applied to minor offences. We nevertheless opted to use it for the crime of genocide because we think that it supports the policy of unity and reconciliation. In other words, those people who destroyed the country can play their part in its reconstruction, thanks to this measure. It’s called community service to differentiate between forced labour and TIG as a punishment.*

The work, he said, “*must absolutely be in the public interest*”, and private citizens are barred from overseeing it. Those engaged in it may work on private properties, assuming they are monitored by TIG and “the labour is in the interest of many persons, for example by working in the fields of widows or orphans.” For this, they are given a sum of money for food and housing.³⁴

The Minister of Justice, Tharcisse Karugarama, put TIG in the broader context of the Government’s policies. *“Community service is not simply an arrangement between the State and prisoners without a place for the survivors. It is an aspect of the country’s general penal policy which is defined by the State, and not by a specific part of its population, for the benefit of the entire population as a whole. In accordance with gacaca, TIG is a positive response to requests for forgiveness expressed by the guilty. In general, penal policy is not a matter between the perpetrator and the victim, but rather for society in its entirety. Community service is not only relevant in genocide cases. It is now part of the new penal code which is still being assessed by parliament. We would like our penal policy not only to punish, but also to serve an educational purpose, and to reflect our will to make Rwanda a law-abiding State”.* (³⁴ page 114)

34 <http://www.redress.org/reports/Rwanda%20Survivors%2031%20Oct%2008.pdf>

TIG a success, says official³⁵

An official at the secretariat of the Works for General Interest (TIG) has expressed optimism over the progress registered hardly a year before the programme began. Anastase Nabahire, an assistant executive secretary of TIG, said this week that TIG activities are currently carried out on 5457 sites countrywide.

He revealed this in a meeting that brought together stakeholders in the judiciary at Alpha Palace Hotel in Kigali. He said TIG has progressed in achieving the three ultimate goals of its inception namely; fighting impunity, promoting unity and reconciliation and at contributing to national’s sustainable development.

He said that among the achievements so far registered by TIG include quarried stones worth Frw397m and 427 houses constructed in Gatsibo District, with hydraform blocks. TIG was introduced as an alternative punishment for people who confessed and sought forgiveness for their role in the 1994 Genocide. (Source : New Times, Date: 29th-February 2008)

Future of TIG and tigistes

After Gacaca rulings, near 107,000 people have been convinced and sentenced to prison for an average length of four years.

On these one hundred thousand people, more than forty thousand (42,000) are, in a certain way, already engaged in a TIG process. Solutions (and community service works) still have to be found for around sixty five thousand people (65,000).

This represents more or less 100,000,000 mandays! (RADA terraces programme on near 2,000 hectares represented around 2,000,000 man days - 2%)

On this bulk of tigistes, the new Penal code (presently under review at Parliament) could add new categories and numbers of tigistes.

³⁶M.Athanase Nabahire, Secrétaire Exécutif Adjoint des Travaux d’Intérêt Général (TIG) donne des éclaircissements sur cette entreprise que le gouvernement Rwandais a mis sur pied : « Vu le nombre élevé de personnes accusées de génocide, le gouvernement a mis en place les TIG, une toute neuve mesure dans les juridictions rwandaises. Les TIG sont proposés à des détenus qui ont avoué leurs crimes et ont, par la suite, été jugés par les juridictions Gacaca. Les TIG seront bénéfiques à travers leurs objectifs, sur plusieurs niveaux. Pour les détenus, les TIG leur permettent d’apprendre un métier qui leur sera utile quand ils rentreront chez eux. Les TIG leur permettent également de réparer les torts qu’ils ont infligés à la société. Ils ont péché contre la société, ils réparent pour la société.

Sur le plan juridique, les TIG permet de lutter efficacement contre l’impunité. Et sur le plan social, ils permettent de renforcer la réintégration et de la réconciliation nationale »

35 http://www.rwandagateway.org/article.php3?id_article=8213

36 http://www.panosparis.org/fr/doc/Rwanda_TIG_voie_vers_reconstruction.pdf

9.2.10 Étude sur la protection des bassins versants et la conservation des sols³⁷

L'érosion des terres au Rwanda a été évaluée à 50 - 400 T/ha.

Le paysan ne la perçoit pas en terme de perte de terre, mais ressent la perte de fertilité de sols, menacée par la surexploitation, la réduction des restitutions de matières organiques et le ruissellement.

L'étude décrit les techniques de lutte anti-érosives utilisées et les travers de l'approche actuelle :

- focalisation sur l'aménagement physique ;
- standardisation des techniques ;
- contraintes socio-économiques fortes insuffisamment prises en compte.

L'étude de la susceptibilité des terres à l'érosion s'est appuyée sur la superposition et la planimétrie de la carte pédologie du Rwanda avec la carte des zones agro-écologiques. Elle a permis de :

- identifier les principaux facteurs de risques d'érosion, en déterminer l'importance et l'impact relatif et en préciser la variabilité régionale dans une perspective de planification ;
- proposer une méthode d'évaluation opérationnelle qui peut être adaptée à l'échelle d'intervention de tout projet d'aménagement et de développement de bassin versant ;
- La pente induit le plus gros facteur de risque ; **17,6% des terres ont un risque élevé, 21,5% un risque élevé et 37,5% un risque moyen. Seuls 23,4% ne présentent que peu ou pas de risques.**

En ce qui concerne les sols eux-mêmes, ils présentent des risques de glissements de terrain lorsqu'ils sont composés de schistes, gneiss, roches micacées ou cendres volcaniques sur dômes granitiques et reposent sur un plan de glissement à faible profondeur. Mais c'est plus souvent la combinaison de ces facteurs à risques avec une gestion maladroite des terres, en particulier des fossés anti-érosifs, qui est la source de ces mouvements.

L'évaluation des risques d'érosion comparée avec l'aptitude des terres permet de définir pour chaque zone agro-écologique les grands axes de la conservation des eaux et des sols.

9.2.11 Aménagements de défense et restauration des sols

Extract from “Schema Directeur des Marais 2003 “³⁷

Structures de gestion de l’eau

Les bandes enherbées larges

On a vu plus haut que la bande enherbée large, structure efficace pour freiner le ruissellement sur les longues pentes et favoriser l’infiltration et la sédimentation intermédiaire, ne convient pas dans le cas de l’exploitation classique du Rwanda. Dans les régions semi-arides d’accueil récemment ouvertes à l’agriculture, on pourrait cependant trouver des conditions plus propices à cette technique ; les exploitations sont plus grandes et disposent de possibilités de mécanisation, les pentes sont plus douces et une production fourragère y est plus susceptible de trouver place dans des exploitations mixtes agro-pastorales.

Les fossés d’absorption

Sur sol perméable de pente inférieure à 20 %, le fossé peut intercepter une part importante du ruissellement et améliorer ainsi l’eau disponible pour les plantes. Au-delà de 30 à 35 %, son efficacité diminue sensiblement, les risques s’accroissent et la pente devient trop forte pour qu’il y ait formation de terrasse progressive.

Entre 10 et 20 %, le ruissellement se poursuit néanmoins et il est nécessaire d’entretenir et de curer les fossés, de les approfondir et de réduire leur espacement, ce qui accroît la charge de travail pour des gains de rendements en définitive limités. Par eux-mêmes, les fossés ne réduisent pas l’érosion en nappe et la dégradation du sol par effet de battance. Il est par ailleurs illusoire de vouloir intercepter les ruissellements exceptionnels, le coefficient de ruissellement étant proche de 1 dans certaines situations. Le remplissage des fossés accroît le risque de débordement localisé et la formation de rigoles par concentration, la formation de cônes dans les fossés situés en aval, puis de rigoles qui poursuivent leur chemin. L’avantage des fossés réside surtout dans la transformation progressive du paysage en une succession de talus et terrasses à faibles pentes permettant la mise en place d’autres techniques complémentaires.

On peut résumer les conditions techniques d’implantation comme suit :

- technique appropriée sur versants perméables de moins de 20 % de pente,
- si des rigoles apparaissent sur la parcelle à aménager, le fossé doit être combiné à des techniques culturales appropriées favorisant l’infiltration (labour profond, paillage, bande enherbée ...), la possibilité d’aménager un exutoire doit être examinée pour évacuer l’excédent d’eau et l’entretien des fossés doit pouvoir être garanti,
- au-delà de 35%, sur sol peu profond ou posé sur un plan de glissement (schiste, gneiss, lit micassé, ou dôme granitique recouvert de cendres volcaniques), le fossé est à proscrire,
- après 5 à 10 ans, on peut transformer la terrasse obtenue en 2 terrasses radicales.

La terrasse radicale

L’intérêt de la terrasse à contre-pente réside dans l’interruption totale du ruissellement, seule technique qui permette par elle-même, d’envisager ultérieurement le maintien et la valorisation d’une fertilité résiduelle ou redressée. Cet avantage est aussi une double contrainte . D’une part, un excédent d’eau sur la terrasse au pied des talus peut provoquer l’asphyxie des racines et peut imposer, lorsque la possibilité existe, l’aménagement d’exutoires (ce qui induit d’autres risques). D’autre part, un drainage plus intense entraîne un risque de lixiviation des éléments minéraux plus élevés, d’où la nécessité d’augmenter l’évapotranspiration (ETR), d’intensifier la culture (cultures associées, rotations plus rapides), de gérer au mieux la fertilisation et d’améliorer la structure du sol par des

³⁷ Groupement HYDROPLAN Ingenieurs GmbH – S.H.E.R. Ingénieurs-Conseils s.a. Rapport global définitif phase II
Rapport de synthèse – Annexe 13

façons culturelles appropriées. Cette exigence d’intensification est également imposée par la nécessité d’un rendement additionnel à la hauteur des investissements consentis par l’exploitant pour l’implantation (environ 600 HJ/ha en moyenne).

Le risque de glissement de terrain est également accentué par l’augmentation du drainage sur les terrasses radicales en raison de l’existence de plusieurs plans de discontinuité hydraulique dont le plus important se trouve entre l’horizon C et la roche altérée D. L’expérience de Kisaro a cependant montré qu’en près de 30 ans, en dehors d’un écaillage de surface sur les talus qui peut survenir dans les premiers temps après l’implantation, le terrassement n’a pas provoqué d’instabilité de pente à court et moyen terme.

Les conditions nécessaires pour l’implantation de ce type d’ouvrage restent cependant assez contraignantes et limiteront leur extension :

- **sol profond, plus de 1,5 m, à la lithologie stable (éviter les schistes, gneiss, lit micassé, ou dôme granitique recouvert de cendres volcaniques), pour les terrasses hautes, type Kisaro, plus de 1m pour les terrasses basses type IPV ;**
- **pente jusqu’à 60 % bien que certaines terrasses de Kisaro dépassent les 80 % ;**
- **disponibilités en fumier, en main d’œuvre et en maîtrise technique qui réserve sans doute cette technique aux exploitations plus avancées et plus grandes ;**
- **apport initial de fumier (minimum 15-20 tonnes en redressement), de chaux (3 à 5 tonnes en redressement) et d’engrais en fonction des besoins des cultures ;**
- **possibilité d’écoulement d’un excédent de production de cultures à bonne valeur ajoutée (pomme de terre, thé, blé).**

Transformation d’une terrasse progressive

Le projet IPV avait proposé d’intégrer la technique du terrassement radical sur les anciennes terrasses progressives peu efficaces par la transformation du talus en une petite terrasse radicale. Le procédé prévoit 4 étapes : (i) séparation des couches par enlèvement de la couche arable mince de la zone amont stérile, (ii) grattage du talus par son sous-sol et formation de la seconde terrasse sur la zone stérile mise à nu, (iii) recouvrement par la couche arable préalablement mise de côté puis par la couche fertile du haut du talus, façonnage de la contre-pente, (iv) fixation du nouveau talus.

Cette méthode permet, sans dépense d’énergie importante, d’améliorer la fertilité de la zone stérile amont de la terrasse progressive, de réduire le ruissellement total en l’arrêtant sur la petite terrasse radicale et de réduire la hauteur du talus initial ce qui diminue le risque d’éboulement.

Les micro-terrasses

La micro-terrasse en escalier constitue une alternative intéressante sur forte pente (40 à 70%) où elle a montré son efficacité en terme de réduction de l’érosion. Le ruissellement est ralenti mais peu réduit et les risques d’engorgement ou de glissement de terrain sont donc limités. Avec des talus de 50 à 80 cm végétalisés et des espaces cultivables d’environ 1 m, elles permettent une bonne stabilisation des versants raides. Elles peuvent aussi être installées sur sols peu épais là où un terrassement plus classique provoquerait le décapage de l’horizon de surface fertile. Houyoux (1993) relève des exemples de ce type d’aménagement avec des micro-terrasses de 80 cm plantée de *Tripsacum* en couronne, des *Grevillea* régulièrement taillés en ligne sur les terrasses et des arbres mixtes d’ombrage en périphérie. De sa parcelle, totalement soustraite à l’érosion, l’exploitant retire du miel, du bois, des tuteurs et du fourrage.

Les terrassettes « inyanamo »

Il s’agit de petites terrasses formées simplement par accumulation de terre (sédiments et labour) le long d’alignements d’herbes fourragères en courbes de niveau. Cette technique peut constituer un complément

intéressant aux structures plus importantes à espacement plus large mais ne convient seule que sur les pentes très faibles (moins de 15 %).

Haies et agro-foresterie

Les haies vives d’herbes (*Setaria*, *Pennisetum* et *Tripsacum*) en double ligne le long des courbes de niveau ont été largement diffusées dans le passé et sont utilisées comme fourrage, comme paillis, pour produire des perches et tuteurs. L’efficacité contre l’érosion a été confirmée avec 80 à 90 % de réduction de pertes en terre même sur fortes pentes, mais la trop faible durabilité de ces haies et surtout la concurrence directe avec les cultures n’ont pas favorisé leur maintien.

Les agronomes ont donc depuis longtemps recherché des solutions de rechange ou de complément aux haies vives d’herbes, en l’occurrence les haies arbustives et l’agroforesterie, selon 2 orientations principales (voir notamment : Berding 1991, Ndindabahizi et Ngwabije 1991, Ndayizigiye 1993, König 1994, Roose 1994) :

- l’élargissement des espèces vulgarisables en fonction de leurs besoins agro-écologiques mais aussi en fonction des usages attendus : si *Grevillea* est accepté dans tout le pays, d’autres essences ont été testées mais occupent encore une place timide dans les champs : *Cassia spectabilis*, *Calliandra calothyrsus*, *Leuceana leucophala*, *Sesbania*, *Cedrella*, *Maesopsis*, *Jacaranda*, *Erythrina abyssinica*, *Cajanus cajan*, *Morus alba*, *Calliandra* en culture pure ou en association avec *Grevillea* ou *Leucaena* donne les meilleurs résultats en terme de protection et de production de biomasse ;
- l’étude des systèmes de culture dont se dégagent deux grands modèles associant arbres en parcelles (200 plants/ha) et :
 - sur sol de pente modérée (20-30 %) : culture en bande de 5 à 10 m entre deux haies arbustives mixtes ;
 - sur sol de pente forte (>30 %) : culture sur micro-terrasse de 1 m avec haie mixte.
- A ces deux modèles s’ajoute le cas plus achevé de la micro-terrasse agro-forestière intégrale observée à Gitarama.

Les avantages de l’agro-foresterie à base de haies arbustives identifiés par tous ces travaux sont les suivants :

- **les remontées biologiques de nutriments** : en exploitant des couches plus profondes du sol, la haie arbustive concurrence moins les cultures que les haies d’herbes et permet au contraire une remontée d’éléments minéraux qui peut être mise à disposition des cultures. Pour autant que le sol ne soit pas au départ trop acide ou carencé en phosphore, ces remontées correspondent à 75 à 130 kg/ha/an d’azote, 2 à 20 kg de phosphore, 20 à 60 kg de potasse et autant de calcium et magnésium en fonction de la richesse du sol en ces éléments, soit l’équivalent de 10 tonnes de fumier de ferme (Roose, 1994),
- **l’apport de biomasse** : de 4 à 17 tonnes/ha/an suivant l’espacement des lignes et la composition de la haie, le *Calliandra* produisant deux fois plus que le *Leuceana*,
- **effet sur l’érosion** : suivant les systèmes adoptés, les pertes en terre décroissent, selon les essais, de 450-470 t/ha/an sur jachère nue et 80-250t/ha sur cultures traditionnelles à moins de 10 t/ha/an, la haie de *Grevillea* seule en culture associée donnant un résultat intermédiaire (83 t/ha/an).

L’impact des haies arbustives sur les rendements des cultures a également été mesuré et, ici encore, les résultats convergent. Le contrôle du ruissellement et de l’érosion associé à l’apport de biomasse et même de fumier ne suffit pas à redresser la fertilité d’un sol ferrallitique acide et n’entraîne qu’un gain de production

limité. Par contre, ce contrôle ainsi que l’amélioration du statut organique du sol a permis la valorisation du chaulage et de la fertilisation minérale ultérieurs avec jusqu’à un triplement du rendement des céréales.

9.2.12 Helpage experience

Chapter extracted from “Helpage Rwanda asbl. Étude des indicateurs de rendement des terrasses radicales en provinces de l’ouest et du nord. Bureau d’études et d’expertise pour le développement. BEED sarl . 163pp.”

Extract of conclusions and recommendations is copied here under for convenience, quotation does not implies consultants acceptance on every statement or proposal.

4. Conclusions et recommandations

4.1. Conclusions

- *La population rurale est très pauvre (une pauvreté issue de racines très complexes);*
- *Les terres sont très exiguës ;*
- *L’organisation des paysans en coopératives de promotion des terrasses radicales est encore à l’état embryonnaire (au niveau des comités de contact);*
- *La population est insuffisamment instruite ;*
- *La surpopulation est un constat évident ;*
- *Les rendements agricoles sont très faibles ;*
- *Les méthodes culturales sont encore archaïques ;*
- *Manque d’intrants performants comme les semences améliorées et la fumure ;*
- *L’élevage n’est pas développé ;*
- *L’encadrement est insuffisant (un seul agronome- de secteur- pour près de 4.000 ménages) ;*
- *L’intérêt des terrasses radicales est manifeste, la population est favorable au terrassement radical pour avoir compris ses acquis ;*
- *L’administration est attentive aux questions de développement ;*
- *La pauvreté s’amplifie en milieu rural au fur des années.*

4.2. Recommandations

Elles vont dans le sens d’apporter des remèdes/solutions par rapport aux contraintes et limites indiquées [...] en exploitant les potentialités locales et les apports externes

- *Asseoir un programme de développement à long terme d’au-moins 5 ans renouvelables (pas “biper la population”);*
- *Ensemble avec les autorités des instances de base, organiser les agriculteurs en coopératives agricoles, l’étendue territoriale d’une coopérative devant inclure plusieurs entités environnementales ;*
- *Conjuguer les efforts avec les autres intervenants dans le développement rural pour mieux lutter contre la pauvreté (comme on souhaite que les exploitants s’organisent en coopératives pour mieux réussir et se faire entendre, il est souhaitable que les intervenants s’organisent aussi en forum de développement);*
- *poursuivre le processus de rentabilisation des terrasses radicales déjà existantes et le désenclavement du monde rural;*

- *faire l’extension des terrasses radicales, d’abord aux nouveaux exploitants des sites déjà répertoriés et ensuite aux autres des Districts concernés (y compris les Districts de Rusizi et de Nyamasheke de la Province de l’Ouest);*
- *la part des exploitants dans le processus des transformations agricoles doit être clarifiée (à partir de ce qu’ils savent et de ce qu’ils peuvent faire) ;*
- *étendre les volets d’intervention de HELPAGE pour mieux asseoir le développement rural, étant donné qu’il n’y a pas assez d’ONGs de développement ;*
- *s’entendre avec les intergroupements des coopératives quant aux cultures à pratiquer à chaque début de saison ;*
- *interdire l’association des cultures sur les terrasses radicales ;*
- *donner de l’aide en matériel agricole et de collecte de l’information ;*
- *après chaque saison : faire le suivi, l’analyse, la restitution (accounting) aux exploitants et prendre ensemble des mesures qui s’imposent pour la saison suivante*
- *participer à l’action de planning familial en vue de réduire la croissance galopante de la population dont les effets ne font qu’annihiler les efforts fournis pour améliorer le niveau de vie de la population. Ici on ne peut recommander que 3 enfants par femme à longue échéance) ;*
- *oeuvrer à la création des emplois non agricoles de façon qu’il y ait une personne qui ait un emploi non agricole/ménage*
- *valoriser le travail agricole de telle manière que l’agriculteur ait un revenu moyen d’au moins 1.000 FRW/jour pour qu’il puisse atteindre un revenu de 180.000 FRW par saison (contre moins de 32.165,7 FRW présentement);*
- *former et assister les agriculteurs de façon qu’ils soient en mesure de prendre en charge le maximum d’activités d’innovation (terrassement radical, enregistrement des activités agricoles sur la fiche de collecte des données, méthodes de semis en ligne, application des fertilisants, constitution d’un petit dossier de demande de crédit, comptabilité rurale, élevage en stabulation, recherche des marchés, détermination des prix de vente, ...) ;*
- *mobiliser l’épargne et distribuer des crédits d’investissement et/ou de développement ;*
- *[...]*

9.2.13 Deutsche Welthungerhilfe

German Agro Action / Deutsche Welthungerhilfe [DWHH] has already a six years experience in bench terraces, inter allia.

DWHH programme below :

Target	Planning targets until 2011
Marshland development	
Area developed	270
N° of local cultivators using developed marshlands	2700
Temporary labour (person . day)	1052000
N° local cultivator trained	3000
Soil conservation and agro-forestry	
Terraces established (ha)	240
Contour lines established (km)	1770
N° of households cultivating new terraces	960
Temporary labour (person . day)	1032000
N° of people trained	1800
Road rehabilitation	
Road stretches rehabilitation (km)	29,8
N° of people trained and organised	300
Temporary labour (person . day)	157940

Table 48: DWHH program

DWHH (private communication) mentions that soil deposits and flood intensity/frequencies are becoming problems in marshlands.

DWHH works on catchment areas, with a set of soil conservation techniques, including agro-forestry. Works are carried on after individual agreements with the NGO about joining the cooperative, shifting to intensive cultivation,, ...

As regard to bench terraces, reasons for poor use or temporary resignation to cultivate come from some limiting factors like :

- limited labour force availability within the households : bench terraces require two to three times more labour input during peak periods
- pressure to enforce the regionalisation / specialisation policy of the production with a past experience in fertilizer credit and poor market condition leading to difficulties to balance the credit after harvests.
- lack of extension activities

9.2.14 Crop Intensification Program

To address the falling trend in productivity of crops and the minimal use and low availability of fertilizer in the country, the Government of Rwanda embarked on a

plan to improve productivity and increase fertilizer availability through the Crop Intensification Programme (CIP) in August 2007.

During the season 2008A (September 07-January 08) pilot zones and crops were identified for this programme and activities were started. The programme was in 8 districts namely; Kirehe, Kayonza, Bugesera, Gatsibo, Musanze, Burera, Rulindo, and Gicumbi.

The core activities of this programme consisted of the bulk buying of fertilizer and seeds by the GoR, training of district and sector agronomists as well as beneficiary farmers in the application of fertilizers and support throughout the season :

- Identification and Consolidation of areas suitable for the programme,
- Subsidization of transport to rural areas and distribution of fertilizers and seeds on credit
- Storage of produce at village level in hermetic cocoons,
- organization of markets with private sector,
- Credit recovery of fertilizers and seeds in money as well as in kind.

Bulk buying of fertilizers was necessary as fragmented orders resulted in quantities not being economically efficient in terms of their other related costs (i.e. transport).

In August 2007 22,400 T of Fertilizer were imported, this was an increase from the previous 14,000 T which had been a relatively stagnant figure as fertilizers were imported only for export crops such as tea and coffee.

In addition to buying fertilizer in bulk the GoR also bought improved seeds for maize, wheat, irish potatoes and cassava cuttings in bulk. This was seen as necessary as the varieties being used in Rwanda were seen as incapable of benefiting optimally from the increased effort in fertilizer application.³⁸

9.2.15 Impact : some considerations ...

With reference to “**Outcome mapping**” book , from IDRC, modesty should be brought back when evaluating impact.

As they are currently applied, the concepts of “attribution” and “impact” can limit the potential of programs to learn from evaluations of development efforts. In light of shrinking international development aid dollars and the need to optimize what is left, donors are increasingly basing funding decisions on their recipients’ abilities to demonstrate “impact.” In development terms, this typically means providing evidence that a particular program has brought about a sustainable improvement in the environment or in the well-being of a large number of targeted beneficiaries.

38 Source : <http://www.minagri.gov.rw>

Methodologically, this requires isolating the key factors that caused the desired results and attributing them to a particular agency or set of activities.

For development agencies, this means identifying and measuring the net, positive effects as they result directly from the activities that those agencies support. In the literature, there are few good examples where this has been done. IDRC has long struggled with this challenge in relation to development research — a struggle made more difficult by IDRC’s style of program delivery. Research results improve peoples’ lives via long, busy, discontinuous pathways. Tracing the connections is at best unreliable and at worst impossible. This disconnect between important upstream contributions and downstream goals has been recognized in evaluation circles for a long time. In his 1967 book, *Evaluative Research*, Edward A. Suchman stated (p. 55.):

The extent to which immediate and intermediate goals can be divorced from ultimate goals as valid in themselves poses a difficult question. Certainly there is a tremendous amount of activity, perhaps the largest portion of all public service work, devoted to the successful attainment of immediate and intermediate goals which appear to have only a very indirect bearing upon ultimate goals.

While the push to measure, demonstrate, and be accountable for development impact is most obvious within the donor community, it has also made its way into recipient agencies and communities through requirements such as “logical framework analysis” (LFA) or “results-based management” (RBM) for planning and reporting on activities to donors. Consequently, the search for impact has become an accepted and dominant part of the development discourse. Nonetheless when donors and recipients try to be accountable for achieving impact, they are severely limiting their potential for understanding how and why impact occurs. The drive to claim credit interferes with the creation of knowledge. As one colleague has expressed it, the singular focus on results yields “clueless feedback.”

9.2.16 Attendance to restitution meeting

Venue : HILL TOP HOTEL, LE 31 MARS 2010.

Agenda : start at 10.00 am

- Introduction (PS MINAGRI or RADA)
- Project presentation (RADA)
- Evaluation (consultant)
- Eco Fin analysis (consultant)
- Proposals and recommendations (consultants)
- Questions / Answers
- Collation

LISTE DES PARTICIPANTS.

N^o	NOM ET PRÉNOM	FONCTION / INSTITUTION	N^o TÉL.
1	DEKENS Jean Pierre	Conseiller European Union	0788302092

“Évaluation, étude d’impact et analyse Ecofin du
Programme de terrassement radical Rwanda COM STABEX 96-99”
Final Report – August 2010

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Table 49: Attendance to restitution meeting. March 31st, 2010

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Abbreviations and Acronyms

AIDCO	Europe Aid Office de Coopération
BRD	Banque Rwandaise de Développement
BAON	Bureau d'Appui à l'Ordonnateur National (anciennement CAON)
CAON	Cellule d'Appui à l'Ordonnateur National
CDF / FDC	Community Development Fund / Fonds de Développement Communautaire
COM	Cadre d'Obligations Mutuelles
EUD	European Union Delegation
EAFC	East African Fine Coffee Association
FERWATHE	Fédération Rwandaise des Théiculteurs
HIMO	Travaux à Haute Intensité de Main d'Œuvre
ISAR	Institut des Sciences Agronomiques du Rwanda
MDGs	Millennium Development Goals
M€	Million Euros
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government, Good Governance, Rural Development and Social Affairs
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education and Scientific Research
MINICOM	Ministry of Industry and Trade
MININFRA	Ministry of Infrastructure
MINISANTE	Ministry of Health
MINITERE	Ministry of Lands, Environment, Forestry, Water and Mines
NPK	Nitrogen, Phosphate, Potassium units
NPRP	National Poverty Reduction Programme
OCIR CAFE	Office des cultures industrielles du Rwanda (Café)
OCIR THE	Office des cultures industrielles du Rwanda (Thé)
OSTR	Opérateur spécialisé en terrasses radicales
PE	Programme Estimate
RADA	Rwanda Agricultural Development Authority
RHODA	Rwanda Horticulture Development Authority
RWF	Rwanda currency
SADC	Southern African Development Community
SOPYRWA	Société du Pyrèthre au Rwanda
STABEX	Système de Stabilisation des Recettes d'Exportation
SWAp	Sector Wide Approach
TIG	Travaux d'intérêt général / Community works

Executive Summary

Introduction

STABEX COM 1996-1999 was signed in November 2001 and the operational phase will phase out at the end of December 2010. It was amended in August 2006 and objectives were reoriented towards 6 components: Coffee, Privatization (Tea and Pyrethrum), Diversification (Bench Terraces and Projects), Decentralization, Technical Assistance, Audit and Evaluation. After different addenda the budget has increased from M€ 20.14 to M€ 24.2, but with the adjusted commitment the effective allocation is M€ 22.9, of which M€ 20.8 have been paid.

Coffee is the main budget line with 43%, whereas Privatization represents 16%, Diversification 22%, and decentralization 7%. The implementation of STABEX effectively started in March 2003 with the BDPA Technical Assistance contract, especially oriented on coffee and privation during the first stage.

The implementation modalities involved in total not less than 27 Program Estimates (PE), and a serial of addenda that often result from delays in implementation.

The present Evaluation Mission has performed the evaluation through interviews in different offices, documentation and visits in 35 sites: 12 WS, 1 ISAR, 5 Tea Estates, 4 Pyrethrum sites, 11 Diversification Projects, and 2 Bench Terraces.

Relevance

The STABEX strategy is globally relevant and in line with the Economic Development and Poverty Reduction Strategy EDPRS - 2008-2012 and the Second Strategic Plan for the Transformation of Agriculture (SPTA II) and coherent with the EU Cotonou agreements.

The first OCIR CAFÉ PE was in line with the action plan 2000-2003 of the government for the coffee sector, but following PEs of OCIR CAFÉ and ISAR were embedded in the frame of the OCIR CAFÉ action plan 2004-2010. For tea and pyrethrum the strategy has been designed for accompanying the on-going privatization process and increasing productivity and export capacities. Bench terraces are both environmental and economic, due to negative impacts of land pressure and natural erosion. Diversification projects help developing local initiatives for new opportunities in the rural areas, entrepreneurship and potential added value of diversified products.

Logical frameworks for the STABEX are for individual components; the ROM 2007 recommendation for establishing a suitable global logical framework, instead of a simple description of the intervention logic, has been integrated separately for each component.

Support to cooperative strategy development for the tea industry and the coffee sector was appropriate and could help promoting participation, accountability and responsibility.

Efficiency

A significant number of activities have been implemented but the operators' efficiency varies considerably and achievements are less tangible for Pyrethrum and some

diversification projects. The lack of strategic planning, high management staff turnover and monitoring made some actions uncontrolled.

Some difficulties delayed the implementation, like the weakness of enterprises, the limited capacity of cooperatives and the lack of mentoring.

OCIR CAFÉ could have been more adequately involved in the planning process and in selection of sites for implementation of new WS, in spite of a good regional distribution. However investments are considerable, including storage facilities, CDM, 5 new WS and equipment of 37 existing WS. Problems persist in WS insufficient capacity, but as paradox some of them are oversized. The production and dissemination of 80 millions of plants was not under full control of OCIR CAFÉ and the census reflects some discrepancies. Training support to CWS has been delivered without mentoring and Coops still lack of capacity to manage the WS. More practical training support for farmers did apparently have better effects. Institutional support to OCIR CAFÉ was very strong, with about MEURO 1, covering more than 50% of their annual operational budgets, but the result is not in line with the disbursed amounts.

The in vitro ISAR lab and the two greenhouses are properly achieved and operational, with a production of 35 000 vitroplants, now in the pipeline. The financial sustainability scenario of ISAR, with RWF 500 per vitroplant, is not properly assessed and requires an adjustment. OCIR CAFÉ should lead a consensus with ISAR to establish a strategy for dissemination of vitroplants.

During STABEX 8 tea estates out of 11 have been privatized whereas 3 estates are still under the OCIR THÉ management (Mulindi, Gisovu, Shagasha), and farmers get at least 10% of the shares. The context evolved with the organization of one federation (FERWACOTHE), 5 unions and 15 cooperatives. OCIR THÉ decided appropriately to utilize HIMO due to difficulties to work with enterprises. The demarcation of plot boundaries has been achieved in 3 estates, but not always satisfactorily. The total drainage rehabilitation of 2 961 Kms could not be verified, however rehabilitated drains show a significant positive change. Road works have been properly realized on 10 estates (138 kms) including 36 bridges. The quality of the 148 rehabilitated collecting centres varies a lot in the different estates. The Cooperative Offices are generally well achieved and appreciated by the coops as well as the equipments provided. Training sessions, delivered to cooperatives, plant engineers and tea makers, had apparently a limited impact. The institutional support to OCIR THÉ was very reasonable.

The privatization of SOPYRWA, in the pyrethrum sector, is partial since it is again a government company. There is no information available on the previous agreement of € 200 000 between the EU and the State company preceding SOPYRWA. Due to the weak cooperation between RHODA and SOPYRWA and lack of raw material results are remaining unachieved with only 92 ha implemented in extension areas, and farmers do not seem very motivated. The original plan to build 5.500 dryers has been abandoned in favour of 450 large dryers, but it looks very ambitious considering the time left. The only performance of RHODA is a 6 hectares pyrethrum multiplication area.

Due to favourable exchange rates and increased budget, 1 777 hectares of bench terraces have been implemented in 40 sites within 6 districts, instead of some 1 260 ha foreseen. The overall works have been achieved timely with 15 selected operators and

labour force (HIMO). Activities of fertilization included the application of lime, manure and fertilizers. The quality of work is adequate, with erosion protection. The terracing programme has been performing well given the limited number of staff appointed.

The diversification component started late in December 2008, and most of the projects have been extended until August 2010. Sixteen projects were awarded out of 120 proposals, through a selection process in line with the EU guidelines, but quality of recipients was not sufficiently assessed and the number of direct beneficiaries not always considered. The monitoring was insufficient before disbursements, hence funds have been diverted in 3 projects. However 5 of 11 visited projects show a very good performance, but two projects need backing. The average beneficiary's contribution is good in theory with 29%, but not controlled. The person in charge at MINAGRI should not open a door for possible time extension.

The pilot Ubudehe project in the Butare province was a learning phase for a decentralised planning process. The financial management of the programme was not adequate enough for such complex programme. In the 390 pilot cells 563 activities have been achieved with larger scope than planned and too many projects targeted acquiring goats, which is not in line with the philosophy of Ubudehe. With the lack of staff provided to CDF monitoring was quite weak. However, the efficiency of the projects has been largely positive in spite of a limited ceiling amount of € 1000 per community.

Most of the involved institutions show weaknesses in designing their strategy, coordinating with other institutions, monitoring the activities and consolidating information and reporting, and the high turnover did not facilitate the adequate record keeping. However after 2008 the reporting became compulsory.

The support office to the National Authorising Officer (CAON) has provided an adequate contribution in procedures and financial reporting. The TA team was not enough dedicated to advise the involved institutions. The EUD has provided adequate support to STABEX, particularly during the last stages.

Most of the projects were cost efficient, including bench terraces, except high institutional expenditures for OCIR CAFÉ, and some inputs at high costs: e.g. estimated cost of vitroplants of RWF 500, drainage costs in general, or the overall pyrethrum component. HIMO was an excellent alternative to cost efficiency.

Effectiveness

The number of direct beneficiaries of the STABEX, tentatively computed, raises a total of about 60 000 recipient farmers, and some 40 institutional staff.

The absence of reliable data does not allow concluding on coffee productivity and regeneration of old trees that should not exceed 40 million in any cases. However obvious progress has been registered in terms of coffee quality due to the high change in number of WS, from 2 to 185 WS, that provides higher added value, in which STABEX contributed. The same occurs for the tea selling prices, although STABEX was simply accompanying the privatisation process. However the pyrethrum has not met its objectives.

Other components will have long term effects, such as bench terraces where agricultural yields are expected to increase, and some good diversification projects that are ranking from average to excellent. The STABEX support to the decentralisation process has proved to be particularly valuable for drawing lessons for the consecutive 4 years Ubudehe programme, which is currently considered as a great success.

Impact

The impact of STABEX is very tangible, since it partially contributed to increase the export value of 38.2% in real terms for coffee and tea together. The share fully washed coffee went to 24% in 2009. The most significant change for the tea sector is the productivity increase in leaves per hectare, from 5.7 MT to 7 MT. The increase in pyrethrum farm-gate prices to about 2 US\$, unfortunately does not result from STABEX contribution.

STABEX has a socio impact in terms of improvement in livelihood, reinforcement of cooperatives, increase of purchase power, technical capacity building, reinforcement of negotiation capacity, women empowerment, and reconciliation. There is also a positive impact on environment, e.g. through the drainage, the limitation of erosion on terraces, water recycling in the WS, or better use of chemicals. In general activities involve at least 30% to 40% of women.

Sustainability

The technical and financial sustainability is questionable, because during the STABEX period institutions have not been able to develop their planning capacity as well a performance monitoring system that measures progress and strengthens accountability, as proposed in the SWAP manual 2010.

Following the privatization process, institutions will have to redirect their role in favour of a more strategic way, including, policy design, planning, monitoring, impact studies...

At the macro level the MINAGRI has not yet proposed any financial mechanism to sustain the different institutions and limit the high turnover. Moreover during STABEX there was no concern for sustainable exit strategy of the different components, except some aspects regarding the improvement of CWS and coffee quality.

For export commodities the potential viability should be related to quality products, focussing on niche markets, instead of quantitative targets, as it is the case now for the tea production.

The mechanism which consists in systematically providing free of charge inputs will certainly affect the sustainability in a long term run, which is the case for coffee vitroplants.

On the contrary many tea cooperatives already established a fund for road and drainage maintenance. The pyrethrum is not sustainable at SOPYRWA as long as the plant works at 10% of its capacity and remote extension areas involve very high cost for transport. The most important, however, is for the MINAGRI, RHODA and SOPYRWA to find a common understanding and strategy for developing the sector in the most appropriated way for a long-term development and sustainability.

The sustainability of diversification projects is related to the capacity of the leader or mentoring, but pay back periods are generally good, between 2 and 8 years.

Other components like bench terraces or UBUDEHE can be sustainable on a long term basis, but it depends on the community organization and management capacity.

Conclusions

COM STABEX may appear like a basket of activities, but it has globally contributed stimulating market-oriented agriculture and local initiatives and accompanying the privatization process to ensure added-value exports. Physical achievements for coffee, tea, diversification, and decentralization are substantial, but the documentation does not reflect these achievements.

With more strategic approaches and appropriate monitoring, STABEX would have gained higher degree of effectiveness. Considerable positive change have occurred between situation 1999 and 2009 in coffee investments, tea privatization, 1700 hectares of new bench terraces, introduction of new diversified technologies, and reinforcement of decentralization process.

Nevertheless weaknesses are visible in terms of WS selection process and WS processing optimization, vision for dissemination of vitroplants, poor design of pyrethrum, lack of monitoring and reporting, absence of impact assessment, failures in some diversification projects, and insufficient management capacity building.

Recommendations

- 1 It is highly recommended for OCIR CAFÉ to lead the marketing strategy of vitroplants, with ISAR which must elaborate a viable business plan.
- 2 The mission does not recommend pursuing external support to the pyrethrum sector, as long as RHODA and SOPYRWA have not entered into a common strategic planning starting with the traditional areas.
- 3 Since EU has entered in budget support, monitoring and impact assessment systems should be prerequisites for the benefit of all parties.
- 4 For diversification projects it is recommended to disburse in accordance with the action plan of each project, to systematically control the effective use of funds including the contribution, and to prepare the recipient to phasing out.
- 5 OCIR CAFÉ and OCIR THÉ should establish links with the related federations and unions of producers to prepare a management training plan dedicated to the coops.
- 6 As STABEX will close in December 2010, the MINAGRI should appoint a specific mission for drawing lessons learnt from the three value chains, coffee, tea and pyrethrum.

Main Report

1. Introduction

1.1. Background

COM STABEX¹ 1996-1999 was signed in November 2001 in accordance with the Lome IV Convention for which the balance amount was originally € 20 147 791 with generated interests included.

This sector programme was aiming at re-launching the market led agriculture after the genocide of 1994 that left agriculture practically with idle lands and exports almost non-existent. When COM STABEX was established, the situation of the different value chains, coffee, tea, and pyrethrum, was in decline, but their restructuring and liberalization was already initiated. The decentralisation process was also introduced by the Government so as to increase the participatory decision process at community level, eradicate poverty, and improve the transparency. The principles for decentralization were published in May 2000.

Therefore the main objectives of COM STABEX were to a) increase the food security and b) to improve rural incomes in particular through increasing added value commodity exports.

The operational period of COM STABEX will phase out at the end of December 2010. STABEX was amended in August 2006 and objectives were reoriented towards 6 components:

Table 1. Budget COM STABEX

Budget COM €	Initial Amount	Amount Adendum ¹	Re-allocation	% of SP/ Total
1 - Coffee - OCIR CAFÉ and ISAR	10 100 000	10 100 000	10 226 649	43%
2 - Privatisation	4 320 000	3 732 714	3 857 636	16%
<i>privatisation Tea</i>	<i>4 120 000</i>	<i>3 032 714</i>	<i>3 100 000</i>	<i>13%</i>
<i>privatisation pyrethrum</i>	<i>200 000</i>	<i>700 000</i>	<i>757 636</i>	<i>3%</i>
3 - Diversification	2 000 000	3 500 000	5 239 946	22%
<i>Bench Terraces</i>			<i>3 650 000</i>	
<i>Diversification Projects</i>			<i>1 589 946</i>	
4 - Decentralisation	2 000 000	2 000 825	1 665 277	7%
<i>Social Infrastructures</i>	<i>1 000 000</i>	<i>1 000 000</i>	<i>1 000 000</i>	
<i>Support to PNRP</i>	<i>1 000 000</i>	<i>1 000 825</i>	<i>665 277</i>	
5 - Technical Assistance STABEX	1 540 000	2 300 000	2 535 514	11%
6 - Evaluations and audits STABEX	180 000	180 000	262 558	1%
7 - Contingencies	0	1 183 344	46 353	0.2%

¹ Cadre des Obligations Mutuelles portent sur l'utilisation des reliquats STABEX 1990, 1991, 1992, 1995

TOTAL	20 140 000	22 996 883	23 833 933	100%
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After different addenda the budget has increased from M€ 20.14 to M€ 24.2, but with the adjusted commitment the effective allocation is M€ 22.9, of which M€ 20.8 have been paid.

The implementation of STABEX effectively started in March 2003 with the BDPA Technical Assistance contract, especially oriented on coffee and privatisation during the first stage.

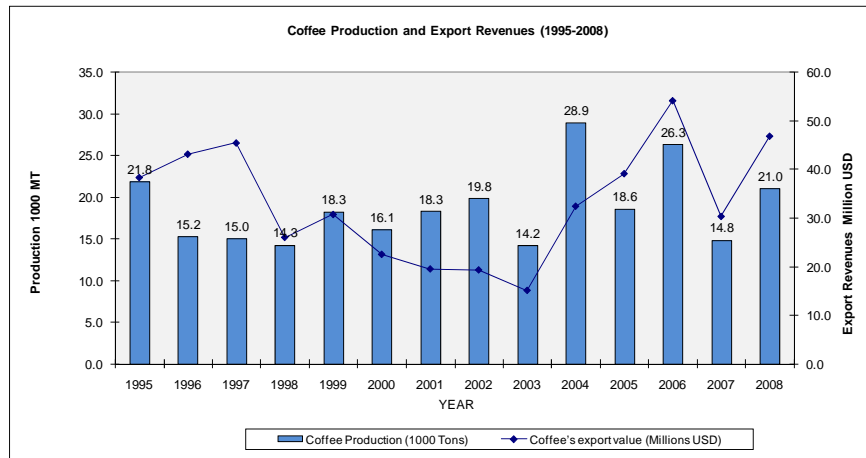
The implementation modalities involved in total not less than 27 Programme Estimates (PE), and a serial of addenda that often resulted from delays in implementation.

1.2. Context of value chains

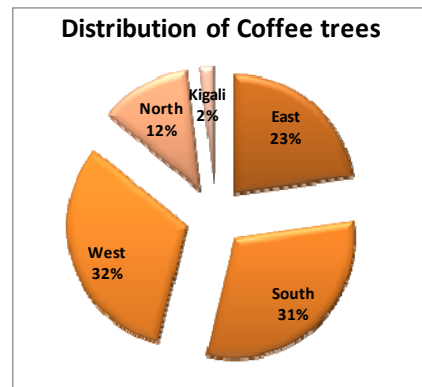
1.2.1. Coffee

Till 1987 coffee areas were significantly progressing, but with the crisis they declined until STABEX started and the new rehabilitation plan for improving the quality of coffee entered into force. The main constraints were at that time the weak level of fertilization, the low disease control, the number of non performing varieties, and particularly aging plantations. From the post harvest side, techniques were not adjusted to the market constraints, because in Rwanda most of the coffee was sold as semi washed and the number of Washing Stations (WS) was insufficient.

The production of green coffee was ranging between 14 000 and 20 000 MT before STABEX and 21 000 and 29 000 MT during the STABEX period. It is confirmed that the share of fully washed increased during the same period.



The coffee production is concentrated on the western and southern sides of the country, which account for not less than 2/3 of the national number of trees. The graph on the right side shows the distribution of coffee plantations in Rwanda.



The quasi totality of existing WS has been implemented during the STABEX period with partial contribution of the programme. There are now 185 WS in Rwanda of which 100 are hold by cooperatives and 80 by private persons. Most of WS (about 70%) are located on the western and southern regions. The total theoretical processing capacity of all WS in equivalent parchment is about 16 550

MT which is more than half of the recent export quantities in equivalent parchment, which means that exports of semi washed could be reduced to 50% with the potential of existing WS, whereas present exports of semi washed are reaching 77%. The following table summarizes the present processing capacity.

Table 2. Coffee processing capacity

PROVINCE	Private	Coop	Capacity Cherry MT	Capacity Parchment MT
Eastern	12	22	15 200	3 040
Kigali city	2	0	1 500	300
Northern	8	14	8 900	1 780
Western	35	37	37 650	7 530
Southern	23	27	19 500	3 900
Total	80	100	82 750	16 550

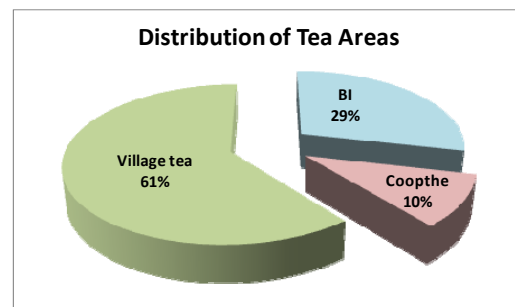
1.2.2. Tea

The tea has been identified as priority sector by the government, that is why the EU decided to support its privatisation and has contributed for more than M€ 3.8. During the last decade 10 estates have benefited from STABEX through rehabilitating programme of plants and plantations. In 2005 the tea area was about 12 300 hectares and increased to about 16 300 hectares in 2009 on the currently existing 11 estates, of which 3 are under the OCIR THE management (Mulindi, Gisovu, Shagasha) and 8 have been privatized (Rubaya, Pfunda, Nyabihu, Cyohoha-Rukeri, Gisakura, Mata, Kitabi, and Nshili-Kivu).



The organization has seriously evolved since STABEX started. There are 15 cooperatives with about 30 334 members organized under the federation FERWACOTHE which comprises 5 unions: *Union Théicole du Nord, Union Théicole de l'Impala, Union Théicole de Nyungwe, Union Théicole du Congo-Nil, Union Théicole Du Nil.*

The tea areas are divided into three types of owners: the Industrial estates, which represent 29% of the tea areas, the Coopthe², with 10% and which is a full cooperative system with



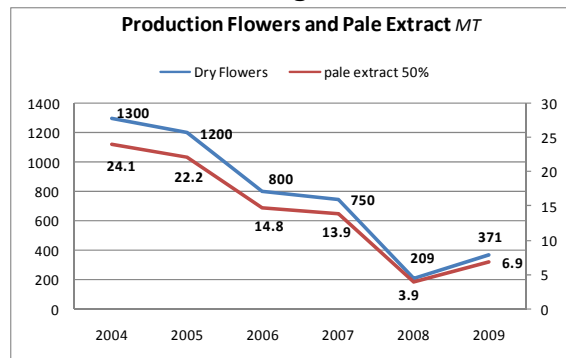
² In 3 estates: Mulindi, Sagasha, Gisakura

collective plantations, and the Village Tea which represents the majority with 61% of the areas and regroup individual producers into a cooperative.

1.2.3. Pyrethrum

Pyrethrum started with USINEX, which was a farmer cooperative, until 1978 when the first factory was established under OPYRWA, a government owned company. In 2001 OPYRWA was privatized and became SOPYRWA, but due to mismanagement the company was sold again in 2008 and is currently owned at 100% by the Horizon company belonging to the Ministry of Defence

Until now pyrethrum is concentrated all around Virunga Volcano forest, in Musanze, Nyabihu, Burera, and Rubavu. In these regions pyrethrum is cultivated by about 7 160 farmers have a contract with SOPYRWA to cultivate pyrethrum in zones called “paysanats”; they received 14 600 hectares of land from the government with the condition that they agree to dedicate 40% to pyrethrum, therefore 0.72 ha per farmer. But in 2009 SOPYRWA received flowers from only 3 000 hectares instead of 5 600 hectares, which means that farmers utilize only 20% of these lands. Farmers are organized in 24 cooperatives and SOPYRWA provides an additional incentive (RWF 35/kg³) to cooperatives as compared to individual farmers.



1.3. Other interventions in the same sectors⁴

The **PDCRE** (Projet de Développement des Cultures de Rente et d'Exportation), in English “Smallholder Cash and Export Crops Development Project”, is jointly funded by IFAD and BADEA. With a total of \$ 25 million, the project started in January 2004 for a term of 7 years. Concerning mainly the coffee and tea sectors, the planned measures are fairly close to those of STABEX, with interventions in specific geographical areas of Rwanda (Kibuye, Kigali-Ngali, Gikongoro and Kibungo). In so far it is complementary to the interventions of STABEX in the same sector.

The **PASR** (Projet d'Appui au Secteur Rural) - Funded by the World Bank for \$ 48 million. The project involves improvement and rehabilitation of wetlands, activities of environmental protection, promotion of exports and support marketing of agricultural products, small rural road infrastructures and promoting non-farm productive activities. In several points it is therefore complementary to STABEX, including its support to the coffee sector, notably through a facilitated access to finance for WS constructions. In terms of export promotion, the project is aiming at supporting exporters in their marketing activities through the quality improvement of their products.

³ According to SOPYRWA

⁴ See « Analyse Economique et Financière de la Filière Café » p. 6 – BDPA (2005)

The **CFC** (Common Fund for Commodities – “Fonds Commun pour les produits de base”) is supported by the CNUCED. The agreement establishing the CFC has been concluded, June 27, 1980 in Geneva and approved on October 9, 1981. The Fund aims to serve as a key instrument for achieving the agreed objectives of the Integrated Programme for Commodities and to facilitate the completion and operation especially for commodities that are of special interest to developing countries. It is in this context that CFC has financed 5 coffee washing stations in Rwanda, which are operational since 2005.

SPREAD⁵ (Sustaining Partnerships to Enhance Rural Enterprise), a USAID-funded development alliance among U.S. and Rwandan Universities, U.S. and European Industries, Rwandan enterprises and institutions, U.S. and Rwandan NGOs, has identified Rwandan coffee as a potentially powerful economic driver. A cornerstone of this alliance⁶ is the strong continuity provided to SPREAD by the partnerships among members of this alliance, most of whom cemented their commitment to Rwandan coffee farmers during the 6 years of PEARL and PEARL II.

SPREAD targets rural Rwandan agricultural cooperatives and enterprises involved in high value commodity chains, and provides them with technical assistance and access to credit and health related services that results in increased incomes and improved livelihoods.

The programme is supporting coffee co-ops using farmers’ collective selling power along with the creation of coffee washing stations. By significantly raising the quality of Rwandan coffee, the international coffee market rewards producers by paying 3 to 5 times the price per pound for superior products

The approach is designed to ensure long-term sustainability. SPREADS aims at identifying high value product supply chains, perfecting each link in the chain from production, processing, packaging and on to transport to the market selling direct to buyer. It also builds Rwandan capacity to work the value chains through appropriate long-term support institutions including NUR, MINAGRI, OCIR-Café, RIEPA and SCA. Finally, SPREAD works with GOR and US partners to advocate, develop, and extend organic farming practices to re-build Rwanda’s slowly degrading and eroding soils.

1.4. Methodology

The evaluation mission started on April 22, 2010 with the arrival of the Team Leader, Jean Noel Perrin, and a first briefing with the Delegation of the European Union on Friday April 23. An overall meeting took place with the different stakeholders in charge of the implementation of the STABEX components. The Team leader made a presentation of the strategy of the mission and organized the meeting with the different stakeholders, to collect available data and documents and to organize the field visits. The mission has been undertaken in 8 steps:

1. A documentation phase until May 3
2. The first field visits phase between 4th and 13th of May, by the Team Leader

⁵ <http://www.greenlivingproject.com/spread-rwanda-coffee-wakes-up-a-national-economy/>

⁶ <http://www.nur.ac.rw/spip.php?article100>. The SPREAD Partnership is led by Texas Agricultural Experiment Station representing the Texas A&M University System, in partnership with Michigan State University and the National University of Rwanda. For more information, click: <http://www.spread.org.rw/>

3. The second field visits phase of visits between 1st and 12 of June, by the Team Leader and the Socio-Economist, Mr. Gilbert Germain
4. A phase for data consolidation between the 13th and 17th of June
5. A restitution workshop on Thursday June 18th.
6. A phase for drafting of the draft report between the 21th and 30th of June
7. A phase for finalizing the report.
8. The restitution of the final report in soft and 10 hard copies.

Field visits have been executed with 2 major objectives:

- Assess the physical achievements and performance of the operators to implement their respective components.
- Evaluate the socio-economic impact and the sustainability of the implemented sub-projects.

An analysis has been made to highlight the cost efficiency, the social impact, the pay back period, and where possible the return on invested funds.

Data physical and financial consolidation has also been realized, because most of the operators used to record information on the basis of the PEs.

2. Relevance

2.1. Relevance to targeted sectors and beneficiaries

As underlined by the TA, the strategy of the first OCIR Café programme estimates (PE) was established in line with the action plan 2000-2003 of the government for the coffee sector, whilst the following PEs of OCIR café, as well as those concerning ISAR were embedded in the frame of the OCIR Café action plan 2004-2010.

The strategy of STABEX for tea and pyrethrum has been designed for accompanying the on-going privatisation process in those sectors and for increasing their productivity and export capacities.

The relevance of developing bench terraces in Rwanda is both environmental and economic. Strong land pressure and erosion due to significant rain falls, with negative impact on the slopes and sometimes marshes downwards, are hindering the development of agricultural production. It is, therefore, not surprising that most of the District Development Plans have the construction of bench terraces amongst their objectives.

The support to diversification projects helps creating and developing new opportunities in the rural areas in terms of production, transformation and marketing, based on local initiatives. There are actually potentially good entrepreneurs and potential added value for non-crop and diversified agricultural products. This also contributes to the decentralisation process.

The mission team verified that there are also generally strong expectations from the rural communities for the STABEX components.

2.2. Relevance to government policies and strategies

According to the Second Strategic Plan for the Transformation of Agriculture (SPTA II): “The purpose of the agricultural investment plan is to contribute to sustainable food and nutritional security, to increase the incomes of rural households, and to secure national economic growth. The plan aims to transform agriculture into a modern, professionally-managed and market-oriented economic undertaking. This will be achieved through targeted investments that create an environment conducive to increased production; especially investing in the infrastructure required for agricultural intensification, promotion of professionalism, agricultural technological innovations and public – private sector partnerships.” Despite STABEX has started to act in Rwanda largely before SPTA II, it reveals to still be relevant with the most recent agricultural policy of the country.

More specifically, SPTA II is also expecting to stimulate added-value activities in the processing of goods and specialty like teas and coffees, to foster market-oriented rural infrastructures, to improve the capacity of Rwanda’s Agricultural Research Institute (ISAR) and certified seeds and to promote farmers’ organisations and capacity-building for producers. Simultaneously, the plan is targeting 100 additional cooperatives successfully marketing products and 852,000ha of additional land protected against soil erosion, using radical and progressive terracing. STABEX is clearly in accordance with all those issues through its different components.

In addition, the objective of intensification and development of non-traditional high-value export products is in line with the STABEX objectives of the diversification projects. The decentralisation programme in agriculture with establishment of mechanisms of coordination between the Central and District Administrations, also enabling the full grassroots participation in programme planning/preparation and implementation, is a guideline for the decentralisation programme of STABEX.

M&E systems and coordination to the agricultural sector as recommended by SPTA II is particularly relevant, but hasn’t yet sufficiently been integrated by STABEX stakeholders.

The STABEX is consistent as well with the first of the four underlying objectives for the Economic Development and Poverty Reduction Strategy (EDPRS - 2008-2012), i.e. increase economic growth by investing in infrastructure; promoting skills development and the service sector; mainstreaming private sector development and modernising agriculture by introducing improved land administration, land use management practices and adopting techniques to reduce soil erosion and enhance soil fertility. However, STABEX did not really tackle the extreme poverty.

Finally, STABEX is relevant with the “Vision 2020”, which is guiding all the reform initiatives being undertaken by the government of Rwanda. In particular, Vision 2020 includes a specific objective to achieve “Rural economic transformation”.

2.3. Relevance to the EU objectives

The programme is a continuation of the EU strategy initiated by the previous STABEX in Rwanda aiming at assisting the government in the implementation of its policies, notably in the agricultural sector, in which about 85% of the population is still working, in order to help fighting against poverty. As a matter of fact, after the genocide of 1994,

agricultural output of major sectors of Rwanda's export crops (tea, coffee and pyrethrum) has entered a process of recession, which affected not only the income from export, but also income of producers.

Since the Cotonou agreements, the EU has systematically underlined its willingness to support the ACP States in terms of economic, social and human development. The programme is coherent with this objective as STABEX and its components are in support of policy stimulus involved in the agricultural sector, the disengagement of the state from production activities through the privatisation process and the overall socioeconomic development of the country. These elements are still appropriate and relevant factors including the level of resources provided.

2.4. Relevance of the STABEX components

COM STABEX has been built with 5 major components of which three value chains (coffee, tea, and pyrethrum) and two development programmes (diversification and decentralization). Merging different types of programmes under COM STABEX did not facilitate the formulation for which the objective, as expressed in the Financing Agreement, is not always relevant: *“increase the food security and increase rural incomes”*. That is why the different stakeholders had to re-formulate their own Log Frame. However, in such a context it is difficult to assess the impact with regards to the global COM STABEX objective. The positive aspect has been the flexibility of STABEX, where funds have been transferred from one component to other, in accordance with the performance. In such a situation the formulation should have included two major objectives: a) improve farm and national revenues through re-launching added value cash- export crops, and b) increase livelihood through local initiatives and participatory approach.

2.5. Quality and coherence of logical frameworks

There is actually no logical framework for the STABEX as such, rather for its individual components. The STABEX, however, presents a description of the intervention logic, specifying the activities to be undertaken, expected outcomes of actions, the specific objective and overall goal.

The recommendation made by the ROM mission of June 2007, concluding that “the EU Delegation and the co-ordination of the programme should ensure a new project plan for establishing a suitable logical framework, instead of a simple description of the intervention logic” has not been integrated globally but separately for each component, and all new PEs following this ROM included a logframe.

The target groups, mostly consisting of producers of coffee, tea and pyrethrum and their organisations are well defined as beneficiaries of the programme. Coordination, management and financial arrangements are also clearly presented and could have contributed to institutional strengthening and local ownership in case of an efficient involvement of the local organisations and agencies.

The support to the cooperative strategy development for both the tea industry and the coffee sector was appropriate as it could help promoting participation, accountability and responsibility.

3. Efficiency

3.1. Management structure and specific arrangements

The NAO, EDF National Authorizing Officer, as programme owner, ensures the administrative and financial supervision of the programme, and also controls if actions are in line with the Government policies.

The Delegation of the European Union, as donor, approves the programme estimates of each component and appoints the technical assistance for the programme.

The Ministry for Agriculture and Animal Resources (MINAGRI), as project superintendent of the programme, ensures the control of its execution.

The implementation of the programme is undertaken under supervision of a Steering Committee, which met at least every six months⁷. The Steering Committee assesses the quality and provides orientations and recommendations for the execution of the programme, and eventually rules on litigious points. The Steering Committee is composed of representatives of the following stakeholders: MINAGRI, MINECOFIN, Technical assistance, Delegation of the European Union in Kigali, representatives of the producers.

The Reception Commission is a body composed of representatives of the administration, the EU, and the recipients. They are basically in charge of the execution conformity, with regards to the norms and the agreements.

3.1.1. Coffee

The OCIR CAFÉ has been selected to implement this component. OCIR CAFÉ is under the MINAGRI and is in charge of the coordination, regulation, and advisory services to the coffee sector. The objective is the improvement of the production qualitatively and quantitatively⁸.

The main activities as consolidated from the 5 Programme Estimates (PE) are:

1. The production and dissemination of 20 millions of plants during 3 years, so as to replace the aging trees and extend the overall coffee area.
2. To motivate the renewal of old coffee plants, through a financial incentive of € 0.45 per plant compensating the temporary income gap. This incentive was foreseen in cash and inputs.
3. To reinforce the technical, managerial and organisational capacities of producers, as well as the capacity of OCIR technicians. This includes technician's wages and cooperative training.

⁷ According to CAON

⁸ According to the law of 2001 (article 3) the OCIR CAFÉ is responsible for:

- Participating to the policy and strategies of the coffee value chain, including the promotion of production, research, processing, training, and marketing.
- Determining the standard norms, control the quality, and transmit certificates
- Promoting adequate work conditions for all operators
- Collaborating with all involved coffee stakeholders,
- Supporting coffee associations and cooperatives, through demonstrations and training
- Participating in = international negotiations and ensuring the application of decisions taken

4. To improve the drying capacity of the parchment (providing drying equipment), and promoting marketing⁹.
5. Promoting WS infrastructures¹⁰, in line with the policy which focuses on post harvest activities.
6. Promoting the most performing coffee plantations, through incentives in the form of inputs (fertilizers or chemicals).
7. Building an in vitro laboratory at the ISAR station of Butare

Table 3. Budget for the Coffee component

#	Activity	Initial Budget €	Revised Budget €
1	Production of plants	1 400 000	1 400 000
2	Incentive mechanism for plant renewal	6 600 000	3 100 000
3	Capacity enhancement	1 000 000	1 300 000
4	Drying and marketing	350 000	700 000
5	WS Infrastructures	0	2 225 000
6	Incentive mechanism for performance	0	625 000
7	ISAR “in vitro” laboratory	750 000	750 000
	TOTAL	10 100 000	10 100 000*

* it seems that after the last reallocation the final budget is € 10 226 649

The original budget has been revised to better fit with the project activities, according to the new strategy which has been adopted in 2002, with more weight given to fully washed processing. The main changes with the addendum N°1 were the following ones:

- Geographic limitation to districts that are not already covered by the PDCRE¹¹ and considered good for coffee production.
- The reduction of budget dedicated to incentive for replanting
- The implementation of two new sub-components: support to marketing and processing, as well as research
- Finance access for WS through a MOU agreed with the “Banque Rwandaise de Développement BRD ». Funds are recovered by OCIR Café and re-injected as subsidized inputs for coffee farmers.
- Financing new actions for the associations: equipment for 37 WS and construction with equipment of 5 new WS.
- Establishing a revolving fund for inputs.
- Marketing support through participation in international exhibitions.

⁹ According to addendum promotional action

¹⁰ 37 existing WS and 5 new WS

¹¹ Project FIDA which operates partially in 5 districts

Implementation modalities OCIR CAFÉ

Three sub-programmes have been established by OCIR CAFÉ to implement the Coffee component of STABEX:

1. Support to production, including the production of plants and mulch¹² and their intensification (input supply, fertilizers and chemicals).
2. Support to cooperatives, including capacity building and WS.
3. Marketing support through international exhibitions.

Production of Vitroplants

The ISAR (Institut des Sciences Agronomiques du Rwanda) has been selected to implement a laboratory and greenhouses for production of coffee vitroplants. The objective is to produce high quality material to improve coffee in quality and quantity with safe and high yielding plants. Following a study in 2002, it was decided to implement an in vitro laboratory in Rubona and two nurseries in Rubona and Ntendezi. Four PEs have been signed:

- PE1: from 24 November 2004 to 23 November 2005
- PE2 : from 1st April 2006 to 30 September 2007
- PE3 : from 1st December 2007 to 30 November 2008
- PE4 : from 21 December 2008 to 20 June 2010

The first PE was dedicated to implementation of the laboratory and purchase of equipment. But many delays occurred, with some modification of the design requested by ISAR, and the implementation effectively started with the PE2. With the PE3 some additional works have been requested and approved by the CAON and the EUD, including pavement of the parking, construction of water tank and protection walls. Therefore the construction works have been finalized in end of 2008 and the laboratory has been effectively operational in 2009.

All activities have been undertaken through regular tendering procedures, including the construction FICO for construction, Africhem for lab equipments, SONATUBE for the generator and SOGERRWA for the two vehicles.

3.1.2. Tea

The OCIR THÉ has been selected to implement this component. OCIR THÉ is under the MINAGRI and is in charge of the coordination, regulation, and advisory services to the tea sector. The objective is the full sector privatization, the increase of the production qualitatively and quantitatively, the increase of yields and the increase of black tea export revenues.

¹² The practice of mulch (paillis) has been abandoned because it was land consuming (1 ha of vegetal production for 1 ha of coffee) which was not relevant in Rwanda because of the land pressure. It has been replaced by inter-cropping production.

Four PEs have been signed, but some delays have occurred in the beginning especially between WP1 and WP2, 24 months:

- WP1: from July 1st 2003 to 30 June 2004 ;
- WP2 : from June 1st 2006 to November 30, 2007;
- WP3: from March 5th to December 4, 2008;
- WP4: from January 1st, 2009 to June 30, 2010.

Expected results from STABEX contribution to OCIR THE in the context of privatization:

1. Construction and rehabilitation of drainage canals on 7 tea estates
2. Rehabilitation of access roads on 10 tea estates and bridges in *Mulindi* (except *Nshili which had no plant*)
3. Construction and rehabilitation of barns on 10 tea estates
4. Construction of cooperative offices and storage facilities on 10 tea estates
5. Purchase equipments and furniture for 14 cooperatives and 5 unions
6. Demarcation of plot boundaries and mapping for 5 tea estates (Shahgasha, Mata, Kitabi, Gisakura, Gisovu), as for Gisakura and Gisovu the bid was cancelled and has been undertaken by the government.
7. Co-financing construction and maintenance of nurseries, so as to ensure 15% of the needs and sell at subsidized rates, but few has been achieved due to the delay in preparing the bids
8. Training cooperatives on organizational issues
9. Training plant engineers and tea makers on international quality standards on 10 tea estates
10. Salaries, operating costs and bonus for some OCIR THE staff
11. Organizing a study tour

(Actually there are 11 tea estates including Nshili, addendum WP4, 7 from WP3 and 4 from WP4)

3.1.3. Pyrethrum

In the initial stage, a specific agreement¹³ was signed with SOPYRWA, but following the weak achievements, it was decided to select RHODA as implementing body to implement this component. RHODA is under the MINAGRI and was in charge of the coordination, regulation, and advisory services to the horticulture sector. The objective is the full sector privatization, the increase of the production in extension areas (150 ha) of Rutsiro-Karongi in the West and Burera-Gicumbi in the North, as well as the increase quantity of final export extracted product and in purchase price of flowers.

With STABEX the extension was supposed to cover 4 districts: Gikumbi, Karongi, Rutsiro and Burera for 55 and 110 hectares during the implementation of the 2 PEs. But taking

¹³ Contract of EUROS 200 000

into account the potential in the traditional region of production, where areas did not increase as compared to 2007; this strategy has not revealed to be relevant and should not have been regarded as a priority. Moreover the above mentioned constraints have not been considered in the original scenarios.

Two PEs have been signed, but some delays have occurred in the beginning with the WP1.

An original agreement was signed directly with SOPYRWA ((€ 200 000).

The PE1 (€ 500 000) had a validity period from April 1, 2007 to September 30, 2008 (18 months) but the activities started only in February 2008 with 10 months of delay. The PE2 (€ 370 930) started on October 1, 2008 and will terminate in September 2010.

For these two PEs it was foreseen:

- Supply of the vegetative material of pyrethrum and manure,
- Comparative study of the clones,
- Construction of dryers, collecting centres and a central storage facility,
- Training delegated producers and project executives
- Operation costs of the project team.

3.1.4. Diversification

Initially, the Financing Agreement planned to support the diversification on the basis of export commodities, following a prior feasibility study carried out by IDC. A second study took place in 2006, which concluded on positive results for honey production. Therefore, in August 2007, the EUD gave its agreement to assign the funds for two sub-components: a) the installation of bench terraces, 2) the support to diversification projects. In September 2008, the EUD agreed to assign the generated interests from invested funds in 2006 and 2007 and to start the programme with a total amount of € 5.239.946.

The bench Terraces component was established in six districts¹⁴ in accordance with the national policies, including the Vision 2020, the EDPRS, the Strategic plan for Agricultural Transformation in Rwanda, and EU environment and rural development strategies, in particular in terms of food security and decentralised development. RADA was selected as implementing body to coordinate and monitor the implementation.

The objectives are to improve population incomes through high labour intensity works and intensification of the agriculture, to improve food security through the increase of agricultural production, and to protect risk areas from erosion. The coordination of the project was ensured by RADA. The budget allocated to the bench terracing programme amounts to EUR 3.7 million. Two PEs have been established for the overall management at RADA (respectively €73 747 and €109 086), and 6 PEs have been established in each selected district (for a total amount of €3 455 021).

A recent evaluation has been undertaken by AGRICONSULTING and the present document is partially based on its results and conclusions.

¹⁴ Burera, Gasabo, Karongi, Nyabihu, Nyaruguru, and Rulindo

Diversification projects have been managed directly at the level of the NAO (CAON) in coordination with MINAGRI and under control of the EUD. Grant contract procedures have been launched for this component.

3.1.5. Decentralisation

Two actions have been carried out within the framework of this component: a) support to the National plan of Poverty Reduction (PNRP) through a pilot project called UBUDEHE, b) support to the Social Infrastructures programme.

For these components the total spent amount has reached €1.665.277. In September 2008, a remaining balance of €335.548 was transferred to other components: coffee privatization, diversification, and audit / evaluation.

Table 4. PNRP - UBUDEHE

PE	Signature	Implementer	Amount €	Validity period
PE1	15/04/2002	MINALOC	1 000 000	03/2002 - 02/2003

Table 5. Social Infrastructures

PE	Signature	Implementor	Amount €	Validity period
PE1	1/12/2001	MINALOC	1 000 000	10/12/2001 - 31/12/2002
AD1/PE1				1/01/2003 - 31/12/2003

The UBUDEHE project included two phases:

- A pilot phase in the area of Butare in 2002, carried out jointly with the MINALOC, planning a) to help the cells for the formulation of their action plans, b) to finance the realization of priority micro projects in 679 cells, mainly targeted on agriculture and breeding.
- A second phase, extended to the 11 provinces, while being based on the experimentation in Butare, with actions limited to training of the districts representatives to the Ubudehe approach, which themselves train in their turn the representatives of each cell.

STABEX support has consisted in facilitating the identification of priority problems at cells' levels, to financially support the implementation of these priority actions and to sensitize the recipients in their role for the implementation and follow-up of the collective actions. The expected results were:

- Social reconciliation with possible reintegration of most disadvantaged people.
- Reinforcement of communities' capacities through a participatory approach (bottom up) resulting in the implementation of an action plan in each cell with a collective project and an economic project for the very poor.
- The institutionalization of the Ubudehe approach.

Implementation modalities include various stages: analysis of poverty in the cells and of problem priorities, resulting in an action plan. It was decided to set up Pools of Development (FCD) in all the districts, directly managed by the communities with the assistance of the CDF (Common Development Fund), the ceiling amount being fixed at 1000 € per cell and 75 € per very poor family. Training was realised in cascade, with the constitution of a team of trainers at the national level, in charge of reinforcing the capacities of representatives at cells level. The immersion phase, of approximately 10

days for 20 groups, involved 800 resource persons including 8 persons in each district (768), 22 people at the provincial level and 10 people at the national level.

Table 6. UBUDEHE Estimated costs

Budget Euros	Amount €	%
Immersion Phase	10 000	1%
Implementation of actions	480 000	48%
Operating Costs	510 000	51%

3.2. Procedures

All STABEX activities are planned through the establishment of Programme Estimates (PE) and the STABEX Coordination Cell plays the role of interface between the PEs' recipients and the EUD. The STABEX Coordination Cell is controlling the respect of EDF procedures, in particular all contractual documents (PEs, tendering documents, contracts, etc....) and is providing its technical opinion on studies, supplies, services and infrastructures, before signature.

All procedures have generally been respected by all institutions and the EUD participated actively in key decisions through regular meetings with the different component management teams. For example the different tenders have been submitted with at least 3 enterprises, and if not the case have been cancelled. However tendering processes have shown their limits because of the technical and mostly financial weaknesses of enterprises. That is why in some cases activities have been carried out through HIMO.

A Delivery Commission has also been established, including representatives of the administration, the STABEX Coordination Cell, one EUD representative and the recipients. The Commission was charged to check the conformity of works, verify the appropriate achievements and approve the delivery.

Calls for proposals have been properly assessed, from the administrative point of view, in spite of the lack of experience from the evaluation committee members, including the two external consultants. However the selection did not involve external assessors that could have given their opinion on the potential reliability of the applicants.

3.3. Input Adequacy

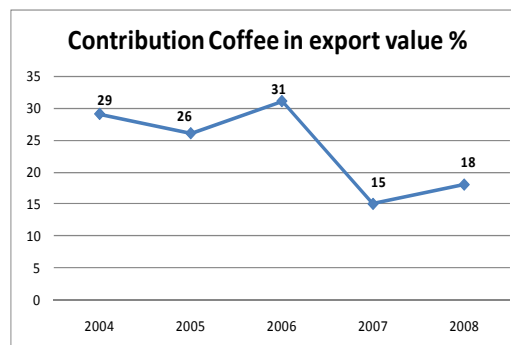
The articulation of the different components involves in general three major pillars:

- Investments
- Institutional support
- Capacity building
- From this point of view, STABEX inputs were adequate, but the balance between the institutional support and the other inputs has not been always appropriate. As a matter of fact, the input concerning OCIR CAFÉ for example has covered more than 50% of their operating costs and it is assumed that they will face some problems for sustaining the activities initiated during STABEX.

3.4. Physical progress and Quality of implementation

3.4.1. Coffee

STABEX has significantly contributed to re-launch the coffee production in Rwanda. The financial support represented most of the times more than 50% of the annual budget of OCIR CAFÉ which has been able to follow the government strategies. However, one of the main objective was the production of 37 00 MT, which has not been achieved so far; in 2008 21 000 MT were exported, and the contribution of coffee in exports has been regularly decreasing.



The main quantities of physical achievements for the coffee component are summarized in the following table:

Table 7. Main achievements of the coffee component

PROVINCE	New WS	WS having received Equipment	Storage facilities*	Rehabilitated CDM
Eastern	1	6	4	-
Kigali city	0	2	-	-
Northern	1	4	2	31
Western	0	18	-	24
Southern	3	17	5	25
Total	5	37	11	80

* including storages facilities to be achieved: 1 in east and 3 in south

Production of new plants

Nurseries - Production of plants - STABEX financed most of the nurseries disseminated throughout the country, based on demands from the districts. Since the beginning, the programme has financed the production of more than 83 millions of seedlings, by divulgation of certified seeds provided by the ISAR station. With a rate of 2.500 plants/ha, it represents approximately 28.000 ha¹⁵. The majority of plants (57 000 000) is supposed to have been produced during the PE 3 and 4. This activity has been 100% supported by STABEX, including manpower and inputs. OCIR did establish a specific follow up device ensuring adequate implementation. However, it is assumed that the 83 millions of seedlings have not been replanted, for different reasons: a) discrepancies appear between the two census of 1999 and 2009, b) the evaluation team has verified that there was at least 50% of losses between the quantity of seeds provided in the nurseries and the effective replanting at farm level¹⁶.

¹⁵ Assuming 70% success rate

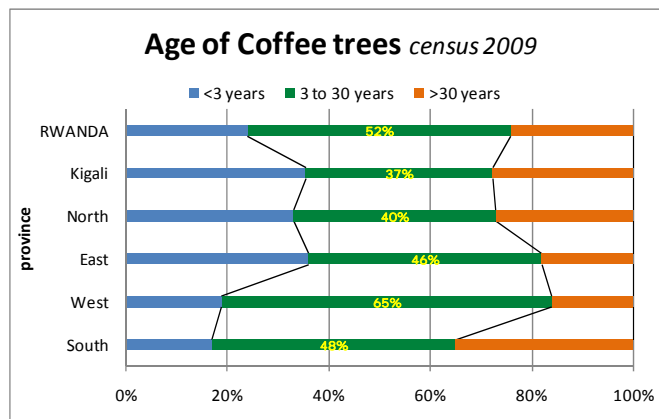
¹⁶ Losses are estimated at 30% in nurseries, 10% during the transaction, and at least 10% during the replanting.

New varieties - The hybrid Ruiru 11 has been multiplied in 5 nurseries, due to its more resistant and high productive characteristics. The project also multiplied the Themeda as cover plant, on 60 hectares.

Intensification

Replacement of ageing plants - As regards ageing coffee-trees, weak practices were noticed, in particular the tendency to abandon plantations when farmers do not have the possibility to carry out treatments against anthracnose; moreover in 1999 25% of the plantations were growing too old¹⁷. In many cases land is converted for food crops.

With STABEX, farmers received an incentive of € 0.45¹⁸ to compensate the production gap during the 3 first years after introduction of new coffee plants. The following graph shows the situation given by the census of 2009, which only takes into account the first batch of replanting 40 million¹⁹ young coffee-trees; a second batch of 40 million young coffee-trees,



which would have been replanted more recently, has not been considered. However, at the end the rate of ageing plants remains quite the same in 2009 as compared to 1999, with 24% instead of 25%. There are some discrepancies in the census of 2009 that have also been underlined by the “Aide Memoire” of IFAD of May 2010 on the PDCRE²⁰.

Incentives for input supply - Practices of intensification - Before 2008 the OCIR recommended 200g of mineral fertilizer per coffee-tree twice a year, which means one ton/ha. After different soil analyses they recommended 100g of manure per coffee-tree, which means 500kg/ha. The actual needs were estimated at 10.000 tons for 70% of the 28.000 hectares. Given the limited STABEX financial resources, they decided to engage the producers in negotiating the purchase of 10.000 tons with three banks (Union of Banques Populaires, Bank of Kigali, and Banque Rwandaise de Développement) that financed loans at 12% of interest, for a global amount of RWF 4 billion. However producers, which were used to receive free of charge manure, hardly repaid their loans (between 10% and 20% of failure). Therefore, the banks had to recover important arrears during the next campaigns.

Every year STABEX financed the activities related to maintenance of the coffee plantation, such as production, and regeneration pruning. According to OCIR CAFÉ more

¹⁷ In 2009 the rate of old coffee plants was still 24%.

¹⁸ 0.23 1st year, and 0.11 for the 2 next years. About RWF 102.5 million have been disbursed in cash (WP 1&2)

¹⁹ According to OCIR CAFÉ, because the AT report 2009 mentions less than 20 million (16.9 millions of regeneration and 2.1 millions of Re-plantation)

²⁰ Page 2 of the IFAD Aide Memoire bullet 7: *the coffee tree census undertaken by OCIR-café in the PDCRE areas in February 2009 shows inconsistencies with the planting data presented. According to the census, there are 4.3 million immature coffee trees (under 3 years) in the project area, while PDCRE planted 7.8 million trees on 3 144 ha in 2007 and 2008.*

than 17 million coffee-trees would have been regenerated (about 8 000 ha); the mission could not verify this figure as reported by OCIR CAFÉ.

Moreover, in order to increase the production, between 2004 and 2006, a large volume of insecticides (186,000 L), fungicides (50 tons) and manure (NPK 2.500 T, in PE 1&2) have been provided to farmers free of charge, but today producers get their inputs at credit²¹.

Research Development - The research development has been undertaken on 11 sites within coffee farms in association with a serial of trainings, and OCIR CAFÉ providing technical support. The objective was to convince farmers on the potential benefit of the mulching. However it appears that the results were quite poor due to the complexity of the modus operandi and the lack of inputs; therefore at the end it benefited more to the 8 OCIR technicians who have been trained than to the farmers.

Soil Analysis - The idea was to resolve the unbalanced practice using a classical NPK 20/10/10; in 2009, OCIR CAFÉ in collaboration with TECHNOSERVE conducted a soil and leaf analysis.

Post harvest and processing facilities

Drying facilities - The idea was especially to distribute drying trays; but the activity has finally been abandoned. The quantities have not been provided by OCIR CAFÉ.

New Washing Stations - Before STABEX, according to OCIR CAFÉ, there were only 2 private washing stations (in Kigali and Giseyni), and co-operatives, not really operational, were at the embryonic stage. As result Rwanda produced 100% of semi-washed coffee (ordinary coffee).

With STABEX, 5 WS have been built by 3 companies for 5 co-operatives, including water supply reservoirs and propellers, washing tanks, 3 disks pulping machines, sorting and drying facilities, offices and stores. The quality of new WS is generally good for the 4 last ones, in spite of some design failures and differences in quality of construction. The first WS in Nyamure, that has been designed by a contractor and supervised by the TA in charge of coffee processing, is particularly badly designed and with poor quality construction. But fortunately, for the 4 following CWS, those errors have been corrected.

However, many cooperatives were not properly prepared to manage the WS and are not yet able to plan their activity, which often explains the delays in getting the bank loan for the campaign in time. The selection has been made on the basis of an evaluation of the associations in 2004. However, criteria are not sufficiently documented and it is difficult to understand why, in many cases, the Districts were involved in the choice of the sites whilst coops have to buy the land (e.g. Rulindo). Among the 40 identified associations in 2004, OCIR selected 5 considered as having adequate potential and management capacities; but the reality seems quite different. In 2008 these associations had to be converted into cooperatives.

Construction works have been delayed, mainly because the enterprises did not have sufficient financial capacity and/or associations did not have sufficient provision to provide their financial counterpart of 25%. As a whole, the implementation lasted nearly 2 years instead of 8 months.

²¹ Source AT report

Equipment of existing WS - A total of 14 existing CWS (Cooperative Washing Stations), which were already equipped with operating WS, benefited from construction of additional infrastructures, including:

Table 8. WS additional constructions

Items	Number
Water supply	4
Reservoir	1
Fermentation tank	1
Ventilated storage tanks	6
Recycling system	1
Separators and elevated channels	6
Storage buildings of about 140 m2	7
Pre drying roof	1
Hoppers for parchment	
Fences	1

According to OCIR CAFÉ a bid would be in process for building 4 other storages, which would mean a total of 11 storages built at the end of STABEX.

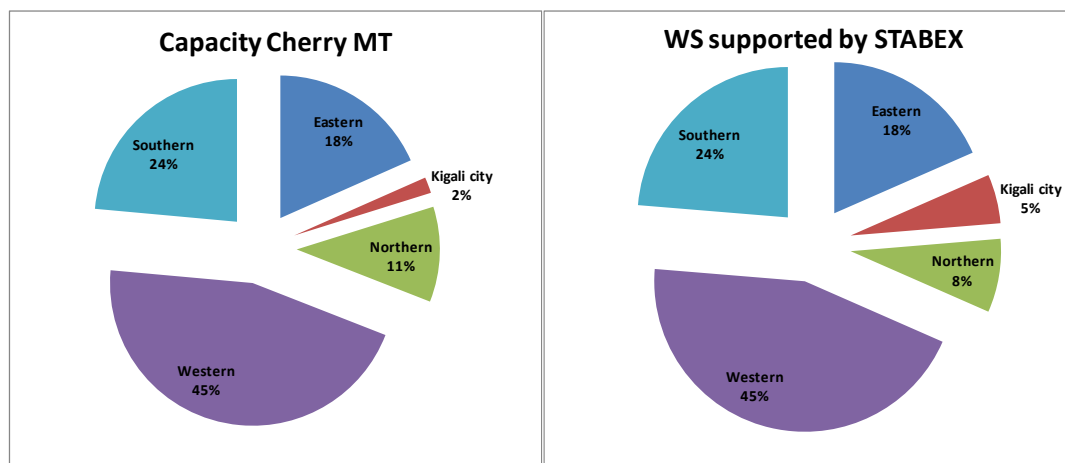
In total 37 private WS, mainly co-operatives²², including the previous 14 CWS received various equipments, as described in the following table:

Table 9. WS equipments

Equipments	Number /M2
Pulping machines	27
Ventilators	65
Netting for Drying tables (m2)	1 000
Recycling Pumps and Water Pumps	28
Generators	38
Machine Pénagos Ecoline	13
Drying equipments	5
Bearings	4
Drainage plates	54
Shade net	1

The following graphs show the excellent distribution of STABEX support to WS, since there is a rigorous relation between the WS capacity and the number of WS supported by STABEX per region.

²² To date, according to OCIR, approximately 100 WS are managed by co-operatives



Rehabilitating CDM²³ - The project had identified 132 CDM that were prone to be improved of which 80 have been repaired in 2007. This idea was relevant since the number of WS was insufficient, but the cost was quite excessive with about € 180 per CDM (in total RWF 10 millions).

Quality control laboratories - As part of the OCIR's strategy, the implementation of 5 quality control laboratories have been realized with the support of STABEX, located either in existing laboratories (Maraba, Rubavu, Kigali, Karongi) or in hired house (Rusizi). STABEX provided equipment and paid salaries. The concept was to provide decentralized advices to the WS in each province, and improve the quality control currently missing in Rwanda. This activity being still in process OCIR CAFÉ could not propose any visit of these laboratories.

Support to cooperatives

Training support and organization – According to OCIR CAFÉ, 174 cooperatives and 15 unions are now established²⁴, of which 125 have a legal status and 50 are equipped with WS. However, according to the last census of 2009, only 20% of coffee producers are members of cooperatives. Cooperatives have set up a “national federation of the coffee cooperatives²⁵” which has elaborated its strategic plan in the beginning of 2010. STABEX helped setting up the statutes and provided some basic equipment.

According to the AT report of June 2009, 40 cooperatives and 12 unions benefited from a special STABEX assistance, so as to reinforce their management capacities. Several trainings were delivered to their members, but the evaluation team has noticed a very weak impact. Training sessions related to technical aspects, management, and preparation of business plan for applying loans have also been delivered.

Institutional support to OCIR CAFE

Staff organization and support - OCIR CAFE comprises 5 units: Production, Planning, Marketing, Quality Control, and Administration Finance Department. The support from

²³ Centres de Dépulpage Manuel

²⁴ In 1999 there was no structured coffee cooperative.

²⁵ Rwanda Coffee Cooperative Federation, with legal status

STABEX represents more than 50% of the OCIR operational budget. STABEX finances in particular the salaries and operational expenditures for:

- a) One civil engineer from the Production department,
- b) One assistant accountant,
- c) The person in charge of cooperatives promotion from the Production department,
- d) 300 Coop animators (out of 400, the other 100 being financed under IFAD)
- e) One driver,

Three agents are paid by OCIR CAFÉ and get only incentives from STABEX:

- a) the Planning chief as STABEX Manager (incentive)
- b) the Production chief as STABEX co-Manager,
- c) the Administration Finance chief as STABEX accountant, (incentive)

Three agents get temporary incentives:

- f) One accountant
- g) One temporary agent in charge of invoicing nurseries
- h) One temporary agent in charge of GIS

OCIR CAFÉ finances the 60 agronomist in charge of advisory services and monitoring input supplies in the 30 districts

Logistical support for OCIR CAFE

OCIR CAFÉ benefited from STABEX to reinforce its logistical capacity; they purchased one vehicle, 52 motorbikes, 220 bikes, and operational costs have been included in the budgets. As general observation, the main weakness in OCIR CAFE is data management.

Equipments - STABEX also financed supply and maintenance of a vehicle pick up, 54 motorcycles for the technicians in the districts and 220 bicycles for extension staff.

Marketing

The marketing support was essentially concentrated in capacity building of key OCIR and Cooperative staff.

Credit BRD – A MOU was signed with the BRD to provide credit to cooperatives. Between 2004 and 2005, 20 coops benefited from RWF 551 million. BRD received RWF 335 million that they had to refund to OCIR CAFÉ, and at the end 88% have been repaid. But due to the weak involvement of BRD to recover the delinquent portfolio, this activity was finally abandoned because it was not anymore eligible under the EU new rules. Apart some losses from some cooperatives, that have been supported by BRD and MINECOFIN, OCIR CAFÉ recovered the remaining amounts in 2008.

Exhibitions abroad – At least 20 persons attended different events or exhibitions abroad.

Table 10. Coffee events or exhibitions

Exhibition	Number of participants
Foire de Paris in July 2005	3
East African Fine Association (EFCA) in Livingstone, Zambia, March 2005	3
East African Fine Association (EFCA) in Arusha, Tanzania, February 2006	3
Italy Exhibition	2
China Exhibition	2
Mission in Japan	5
London 2010	2
20° conference SCAA in USA April May 2008	2
Cup of excellence Kigali	NA
IEFCA in Rwanda in February 2009	NA
Planned participation to cup of excellence August 2010	NA

Census

STABEX co-financed the national coffee census in 2009 with USAID (SPREADS), and the GIS Unit which contributes to monitor the production (mapping of production, WS, nurseries, and diseases, etc...).

Table 11. Comparison of census 1999 and 2009

	1999	2009*
Number of coffee producers	400 112	392 000
Total areas (hectares)	24 000	28 800
number of plants per farmer	150	180
Number of coffee-trees ²⁶ millions	60	72
Number of coffee-trees < 3 years	7	17.5
Number of trees between 3 and 30 years, millions	38	37.3
Number of coffee-trees > 30ans ²⁷ , millions	15	17.2
Productivity (g/plant)	416	485
Estimated production (tons)	18 250	16 000**
Potential production (tons)	38 310 820	

*Reference to last census – situation in April 2009, On the basis of 2500 plants/ha

** 2009 was a low cycle year because there was 21 000 TONS in 2008 and we the projection for 2010 of 26 000 Tons, meaning that 2009 does not reflect the exact production of Rwanda.

Evolution - a fall of intensification by grower between 2002 and 2003, but a strong recovery thanks to the STABEX between 2005 and 2006 ago, so that the number of coffee-tree by grower increased from 150 to 180, between 1999 and 2009.

The GIS unit confirms some difficulties to get accurate figures and is presently updating the census 2009.

²⁶ The 40 millions coffee trees that would have been replanted in 2009 are not included in the census

²⁷ coffee trees are productive after 2 or 3 years, but beyond 30 years they are considered as old unproductive plants

3.4.2. ISAR

The activities of ISAR did start quite late, since very few have been implemented during the first PE. The implementation of infrastructures started in 2006 and 2007 with the second PE and was finalized with the third PE. The enterprise FICO did realize the construction works adequately, comprising one laboratory and two nurseries. Additional works finalized in 2008 have been undertaken to improve the environment. Additional investments have been provided during the same period, including office furniture, computers, one vehicle and laboratory equipments.

The laboratory in vitro specialist who was foreseen during the initial phase has finally been recruited from Kenya in 2007. The permanent staff (two technicians, two investigators, one accountant and one driver) has been recruited and key staff have been trained in IRAZ Burundi, because the authorization was not delivered for Kenya.

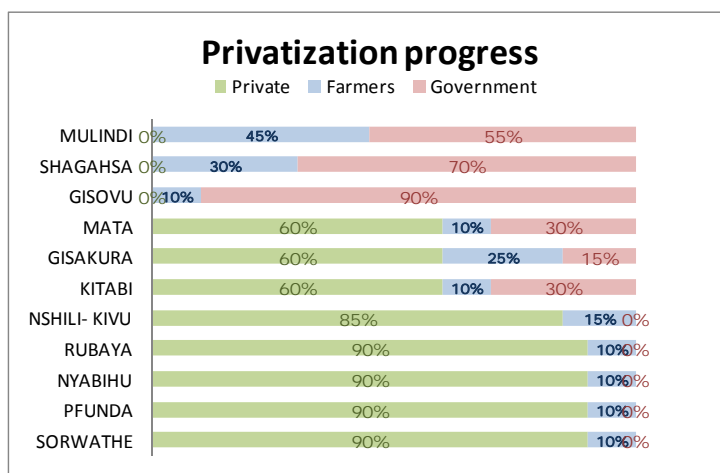
Finally the in vitro lab was operational in December 2007 and really started with the fourth PE. However the protocol for the coffee vitroplant has been finalized quite late with the recruitment of the Kenyan consultant. The technique utilized is the somatic embryogenesis, which is the most appropriate to ensure a large quantity of embryos with similar instances to the mother plant. The overall process of vitroplant takes about 18 months, including the production in nurseries. To date about 32 000 explants have been produced of which 3 500 in nurseries.

The coordination with OCIR CAFÉ has been made through a protocol in which the OCIR is committed to buy the vitroplants to ISAR. The quantity (500 000 plants) has only been clarified in the PE, but is absent in the protocol.

3.4.3. Tea Privatization

Privatization

The privatization process started in 2003 and 8 estates have since been privatized²⁸. Mulindi and Shagasha are yet not privatized because of absence of industrial block; actually 90% is held by Coop-Tea and 10% by Village Tea. The bid was launched for both, but without finding any purchaser. The idea is to give up to 40% of the shares to the Village Tea cooperatives. Gisovou was privatized in 2008, but the investor did not honour his engagements.



Delays in implementation

Many delays have occurred during the implementation, because enterprises failed in their commitments:

²⁸ SORWATHE, Pfunda, Nyabihu, Shagasha, Rubaya, Nshili Kivu, Kitabi, Gisakura, Mata

- Many enterprises were involved in different bids and did not have the financial capacity to take on their commitments. This is the case of EMC, which was in charge of Nyabihu and Gisovu. Some enterprises like in Kitabi did not even start for lack of financial resources.
- Some enterprises do not have the technical capacity and entered in the bid without previous on site assessment, for example for availability of raw material.
- Sometimes enterprises did lack of manpower of qualified staff for masonry works.
- Contracts are not taken seriously, because enterprises know that there is always a possibility of getting extra time addenda.
- Enterprises are requested to have a bank account, but some banks also delayed the transfers in their regional branches from 1 to 2 months.
- Procedures are quite long and take at least 3 months.
- The rainy season was also an important factor.

Drainage canals

Seven estates were concerned by drainage due to high flooding during the wet season, (Mulindi, Kinihira SORWATHE, Pfunda, Nyabihu, Shagasha, Mata, and Gisakura). A study has been undertaken by BDPA with topographic assessment and tender dossier preparation from March 2005 to February 2006, and OCIR THE envisaged to execute directly the works, but finally a tender was launched and three companies were awarded in October 2004 for Shagasha, Gisakura and Mata²⁹. Works included the capture of the river Kabirundwe, and the drainage for Coopthé Mwaga-Gisakura, Coopthevig and for Mata. Some delays have occurred during the execution of the works because the enterprises complained about breaks in payments and OCIR THE decided to execute directly the 2nd tranche under HIMO. A committee has been established to plan and monitor the activities. In total 451 kms of secondary drains have been built and 2961 kms of 1st 2nd and 3rd have been rehabilitated for the seven estates³⁰, which is quite considerable, given the total expenditures of € 527 395 was half of the WP planned budgets and represents 20% of the OCIR THE total budget.

Table 12. Tea Drainage works

Drainage 2nd drain building Kms	451
<i>Drainage 1st drain rehabilitation Kms</i>	<i>1 053</i>
<i>Drainage 2nd drain rehabilitation Kms</i>	<i>1 138</i>
<i>Drainage 3rd drain rehabilitation Kms</i>	<i>770</i>
Drainage total drain rehabilitation Kms	2 961

Access roads, road works & bridges

The road works on 10 estates included also bridges especially in Mulindi estate. The overall tasks have been implemented with many constraints, because the awarded

²⁹ COGEDAC for Shagasha, ECNA for Gisakura and ATHENYA for Mata

³⁰ Mulindi, Kinihira SORWATHE, Pfunda, Nyabihu, Shagasha, Mata, Gisakura

companies overestimated their technical and/or financial capacity or underestimated the tasks.

- A study contract has been undertaken by EGTC in December 2006 but results have been hand over only in May 2009, and the OCIR THE considered that it was of poor quality. Finally the study was achieved with one year delay.
- Another study concerned the four bridges in Mulindi to facilitate the river flows beyond the dam, and has been achieved with ATLANTIS in October 2006, and the final conclusions, also with a delay, were provided in November 2007. ATLANTIS was in charge of monitoring the execution, which started in September 2008. Following the study in Mulindi, a bid was launched in April 2008 and the company STRONG was awarded in September 2008. The execution was foreseen for 4 months but the company had some difficulties to purchase the metallic nozzles, therefore they decided to modify the original design and build it in concrete. Two addenda were signed in December 2008 and April 2009 to reshape the design and extend the execution period to 7 months.

Following these experiences, the OCIR THE decided to execute the contracts through HIMO, so as to ensure a timeliness implementation at acceptable cost and with the participation of the local communities. Therefore the OCIR was the executing agency in charge of planning, execution and follow up. The first building site was Mulindi, as pilot sub project, and later the execution was extended to other sites since June 2008. Apart the difficulties to recruit manpower and find the raw material it seems that this concept was much relevant, and most of the workmanships were under HIMO. The following table summarizes the overall achievements to date:

Table 13. Tea Road works

Access roads Kms	138
Bridges (number)	36
Other road works (number)	439

Construction and rehabilitation of barns and Cooperative facilities

The barns are utilized as tea collecting centres. In the beginning the OCIR THE signed contracts with enterprises to rehabilitate 10 barns in Rubaya and 2 in Mulindi and at the end the total of 148 barns have been built or rehabilitated, and 8 cooperatives offices rehabilitated, with an implementation made under HIMO. The quality of construction is generally good and the cooperatives state that these constructions improve significantly the collection process.

Table 14. Tea barns and coop offices

Barns / Collecting Centres (number)	148
Cooperative Offices (number)	8

Equipments and furniture for cooperatives and unions

Cooperatives were lacking of furniture office equipment and transport facilities. Computers - Again the awarded company³¹ in 2007 could not honour its engagements and the contract was cancelled in March 2008. At the end it was decided to launch a

³¹ SOMECA Rwanda

restricted consultation and a new agreement was signed³² in January 2009. The computers were delivered to the co-operatives in February 2009.

Furniture – Quite similar scenario occurred for the bid with ICT Consult that was not able to provide all furniture as stipulated in its contract of July 2008. OCIR requested the NAO to close the contract and deliver directly the remaining furniture.

Motor bikes – a restricted consultation was launched by the OCIR THE for the acquisition of two motor bikes for two co-operatives (COTRAGAGI and COOTP) in August 2008 and in 2009 a bid was launched to purchase motor bikes for 11 cooperatives.

Demarcation of plot boundaries and mapping

As part of the privatization process, the demarcation of plot boundaries and mapping was undertaken under STABEX. Five estates have been selected and demarcation included the mapping.

- Contract for Shagasha has been signed with DELTA in October 2007 and works finalized in September 2008
- Contract for Kitabi has been signed with EXPERCO in October 2007 and works finalized in April 2008
- Contract for Mata has been signed with EXPERCO in October 2007 and works finalized in April 2008
- Contract for Gisakura has been signed with MEGA NEWTON in November 2007 but works were not achieved so that the contract was cancelled in March 2008
- The bidding procedure for Gisovu has been cancelled.

At the end, 2180 hectares of demarcation have been achieved.

Table 15. Tea demarcation

Demarcation Ha	2 180.6
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Construction and maintenance of nurseries

STABEX co-financed the construction (manpower) of a nursery in Gisovu for 7000 000 plants.

Table 16. Tea Nurseries plants

Nurseries plants	7 000 000
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Training cooperatives, plant engineers and Tea Makers

During STABEX training have been delivered to OCIR THE staff, cooperatives and Tea Makers:

- Training of 22 trainers in Kenya in September 2004
- Training session for agronomists, in Shagasha, December 2004

³² with the company COMPULEC

- Training session for tea plant staff, cooperatives and farmers in Pfunda, April 2005
- Training session for 31 members of tea cooperatives in Kenya in October 2006
- Training session on cultural practices for OCIR THE staff and cooperatives in Shagasha in August 2007 and Pfunda in September 2007
- Training session for Tea Makers in India and Sri Lanka in 2007
- Training session for four OCIR staff on public markets in South Africa
- Training session for five OCIR staff on cultural techniques and road rehabilitation in November 2008

Institutional support to OCIR THE

STABEX financed the operation costs of OCIR THE and salaries of one engineer recruited in July 2007, one Administration Assistant recruited in August 2007, two Technicians (planned but not recruited), and staff incentives.

Study tour

There were two actions:

- A study tour in Kenya with the members of FERWATHE (Fédération Rwandaise des théiculteurs)
- A study undertaken by IBF regarding the social measures for the privatization process.

3.4.4. Pyrethrum Privatization

The first agreement with SOPYRWA was not successful. Two collective dryers were equipped with 152 000 square meters of polyethylene sheets in Kora and Kanyamiheto and one individual dryer for all producers. However, the only outcome is that the wood drying system was abandoned and results were very weak.

For the PE1, the extension of pyrethrum was supposed to meet 55 ha in collaboration with SOPYRWA that was supposed to provide the vegetative material. This procedure has not been successful as anticipated, because of the lack of vegetative material and priority was given by SOPYRWA to the traditional areas. However the MINAGRI confirming the need for continuing the action it was thus decided to recruit suitable project staff, including an engineer A0 and two engineers A2³³, to involve the local authorities and to directly buy the vegetative material from producers. Finally the project did extend 43 hectares in 3 districts including 6 sectors.

Table 17. Pyrethrum Extensions in PE1

Districts	Sectors	Planned area PE1 (ha)	Planted area 2008 (ha)	%
BURERA	Bungwe	8	8	100 %
	Kivuye	12	5	33 %
RUTSIRO	Gihango	20	16	80 %
KARONGI	Mutuntu	10	9	90 %

³³ Staff include: a) regisseur (incentive), b) accountant (incentive), c) coordinator, d) 2 technicians agronomists

	Gitesi	5	5	100 %
TOTAL		55	43	78 %

For the PE2, it was planned to extend 110 hectares and it was decided to multiply seeds with the installation of approximately 10 hectares of nurseries (in 2009 & 2010). The main achievements were sensitizing the farmers and the identification of the future producers. The vegetative propagation was replaced by seed propagation and 8 hectares of nurseries have been implemented in all extension areas. The total extension area was 49ha that have been implemented in the 3 first districts and one new district, whereas 110 hectares had been prepared and organic fertilizers provided to those farmers. Purchases of vegetative material came from Musanze, Nyabihu and Rubavu Districts. The main observation that has not been yet assessed by RHODA is that many planted areas disappear from one cycle to another.

Table 18. Pyrethrum Extensions in PE2

Districts	Sectors	Planned area PE2 (ha)	Planted area 2009 (ha)	%
BURERA	Bungwe	19	4	21%
	Mayagiro	1	0	0%
	Gatebe	24	8	33%
GICUMBI	Rubaya	16	2	13%
RUTSIRO	Gihango	10	8	80%
	Murunda	11	8.5	77%
	Manihira	10	2	20%
KARONGI	Mutuntu	2	1.5	75%
	Rwankuba	5.5	6	109%
	Gitesi	11.5	9	78%
TOTAL		110	49	45%

Dryers

During the PE1, a contract for manufacturing and installing 23 dryers exclusively in the extension areas was signed in September 2009 with a local company. They have been installed and were operational for at least one campaign.

Table 19. Pyrethrum Implementation of Dryers

Districts	Sectors	Number of implemented dryers
BURERA	Bungwe	8
	Kivuye	2
RUTSIRO	Gihango	4
KARONGI	Mutuntu	5
	Gitesi	4
TOTAL		23

It was originally planned to build 5.500 dryers (1 m by 6m) costing approximately RWF 25 000. The number has been reduced in the PE2 to 1 338 dryers at RWF 35 000 FRW,

due to delays from the enterprises. The new concept was based on the model of collective dryers, which was made by the USAID project PYRAMID with three levels of drying and a transparent roof, but three times more costly (about RWF 100 000). RHODA envisages reducing the cost in buying vegetative material and engaging occasional workers, and plans implementing 450 dryers before the deadline of September 2010.

Clone study and collecting centres

The comparative study of the clones has not been carried out and the budget has been transferred to plant multiplication for about 6 hectares. Collecting centres have not been implemented, because of weak production.

Training

Training on cultivation methods and disease control for delegate farmers and project executives have been carried out in January 2009 for 14 agronomists in the extension areas and 3 agronomists of the project, and on post-harvest drying activities and seed management in October 2009 for 62 people including agronomists from all areas and co-operative managers.

3.4.5. Bench Terraces

The efficiency of bench Terraces is good. It was initially planned to execute some 1 260 hectares of bench terraces, but, due to favourable exchange rates, this target was revised three times up to 1 777 hectares. In April 2010, 1 728 hectares have been implemented in 40 sites within the 6 districts, which means 98% of the revised target³⁴. Moreover for the district of Nyabihu, the protection of Jenda watershed has been realized.

The overall works have been achieved quite timely as compared to other components and payments of OSTR (Opérateur spécialisé en terrasses radicales) were made within acceptable delays, except some difficulties regarding payment of HIMO workers. However it seems that the effective site identification has not been documented by RADA. The following table shows the progress as compared to the revised planned area³⁵.

Table 20. Bench Terraces site achievements

District	Planned Area ha	Achieved Area ha	% progress
Gasabo	310 ha	298	96
Rulindo	317 ha	305	96
Burera	310 ha	306	99
Nyabihu	230 ha	239	104
Karongi	310 ha	298	96
Nyaruguru	300 ha	303	101
Total	1 777	1 748	98

The 15 OSTR which have been selected for the 40 sites have adequately performed the works and the procedure for recruitment of labour force (HIMO) seems to have been

³⁴ The average by site is 43 hectares

³⁵ The original planning was 210 hectares per district, therefore 1 260 hectares

transparent. In two districts, Gasabo and Rulindo, the labour force was made of 80 % Tigistes³⁶, but there was no clear rationale for this choice. The present mission had the opportunity to visit some terraces and assess the good quality of works including the appropriate use of fixing plants. Activities of fertilization included the application of lime, manure and fertilizers, but the total quantities of fertilizers have not been recorded by RADA, therefore the AGRICONSULTING report does not provide any consolidated data. The total consumption of lime is 1 135 MT, manure 12 436 MT and travertine 0.56 MT. However the evaluation mission does not understand why different products were applied in different sites, especially lime and manure, which have completely different functions.

District and sector agronomist have received technical training to follow up the activities together with four RARA agronomists. Therefore the monitoring was delegated to the sector agronomists and weekly supervisions undertaken by the Programme administrator and the soil conservation Technician. But there was apparently a lack of checking labour force presence.

3.4.6. Diversification Projects

The call for proposals was launched in 2008 and 120 proposals have been recorded of which 60 pre-selected and 16 awarded. The contracts were signed in December 2008 by EUD and on February 11, 2009 by the beneficiaries. The projects are mostly for 18 months, because 6 projects of 12 months were brought back to 18 months after endorsement, which means that they must be closed in August 2010.

Most of the projects are relevant and well managed, but some projects have not been properly established, mainly because of weak management capacity. Follow up missions have been undertaken to control the viability of the projects, but it seems that it has been insufficient, because so far 3 projects have failed due to embezzlement; in two cases³⁷ the coop chairman has diverted the funds for his own interest, and in one case works have not been undertaken. One of the main failures is the disbursement procedure, which is not enough based on effective progress and assessment of qualitative implementation.

Apparently the evaluation committee had a weak experience of this kind of procedure and the formulation of contracts lacks of adequacy as reference to the normal EU call procedure. There was a delay of 9 months to process the 121 proposals, despite having received the support from the EUD.

The TA itself recognized that the weak side of diversification projects is primarily the lack of follow-up to ensure that promoters will respect their commitments and that final recipients are really those mentioned in the proposals.

Table 21. Quality of visited diversification projects

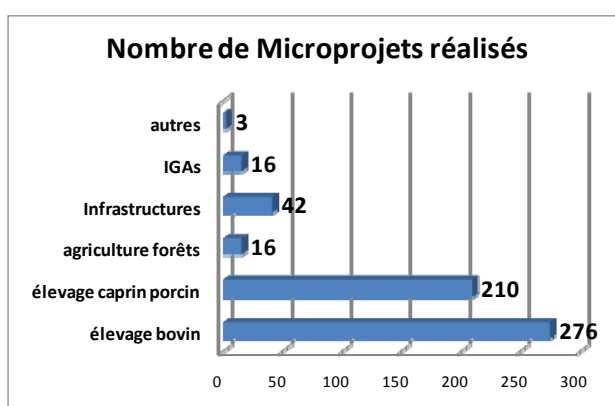
Project	Relevance	Efficiency	Impact	Pay Back & Sustainability
Fish culture	Excellent	Excellent	Economic social	4 years excellent
Dairy goat	Good social	Good	Economic and Social	5 to 7 years
Ikambere Dairy	Medium	Very bad	Diverted funds	NA

³⁶ Special arrangement to utilize prisoners as workers for public works

³⁷ Dairy production and Mushrooms projects

Training – support document were provided in Kinyrwanda : a training manual was elaborated as well as a booklet entitled “Ubudehe Approach” to facilitate the training phase at the level of the cells. In total 224 persons were trained in districts of 6 provinces and 10 026 at the level of the cells. They were in fact a 3 days training session and not 10 as planned. The training cost in the remaining districts of the province of Butare was approximately € 104 000 and the cost for the 291 remaining cells was approximately € 209.000 . The mission could not get more details on the achievements of these additional supports, due to the lack of information from MINALOC as well as from the TA reports. The evaluation documents³⁸ show that communities in general had a good knowledge of the UBUDEHE process and a very positive appreciation.

Supports to Microprojets – within the 390 pilot cells 563 activities have been implemented in more various fields than what was initially envisaged: agriculture, breeding, fish-culture, but also timbering, small shops, housing constructions of roads and bridges, credit funds, purchase of vehicles, and support to co-operatives. The total amount for these pilot actions in the area of Butare was approximately Euros 204 000.



The allocated amount was € 1000 per cell, and there was a good appropriation by the communities, with a catalytic effect with the possibility of redistributing this “block grant” to other members of the cell. However the predominance of breeding projects and in particular for small animal breeding, such as the goats, reflects the limits of the first UBUDEHE approach and analysis of the collective needs.

3.5. Summary of achievements to forecasts

Table 22. Coffee achievements to forecasts

MAIN EXPECTATIONS CAFE	MAIN REALISATIONS
40 cooperatives supported by project	15 CWS; 27 coop with private WS
3.600 ha regenerated	8.467 ha regenerated
66.5 million plants produced in nursery	83 million (according to OCIR)
40 million of trees replantation and regeneration	19 million (TA report)
60 ha of Mulch of themeda planted	160
37 stores-offices installed	13

³⁸ Réflexion et évaluation des prospectives Ubudehe, Peter Uvin et Josepha Nyirankundabera, Juin 2003

Number of training realised for producers & agricultural technicians 200 managers trained 287 farm animators trained	NA
5 new WS constructed	5
37 WS equipped	37
80 CDM (Centre de dépulpage manuel)	80
10 coops trained in WS management	NA
5 coops supported in financial management	7
Installation of a GIS system at OCIR CAFE & Coffee census 2009	OK
335 million RWF available at the BRD for the marketing of parchment or coffee cherries.	Established, and 294 million now reimbursed
Participation of 15 coop managers in international fairs	10

Table 23. Tea achievements to forecasts

MAIN EXPECTATIONS TEA	MAIN REALISATIONS
Construction & rehabilitation of drainage canals on 7 tea estates	7 Estates
Rehabilitation of access roads on 10 tea estates and bridges in <i>Mulindi (except Nshili which had no plant)</i>	10 Estates
Construction & rehabilitation of barns on 10 tea estates	14 Estates
Construction of cooperative offices and storage facilities on 10 tea estates	7 Estates
Purchase equipments and furniture for 14 cooperatives and 5 unions	50% and ongoing
Demarcation of plot boundaries and mapping for 5 tea estates (Shahgasha, Mata, Kitabi, Gisakura, Gisovu),	3 Estates
Co-financing construction and maintenance of nurseries so as to ensure 15% of the needs and sell at subsidized rates	1 (7 million plants)
Training cooperatives on organisation	30 members in Kenya and others local training
Training plant engineers and Tea Makers on international quality standards on 10 tea estates	15 persons in India and Sri Lanka

Table 24. Pyrethrum achievements to forecasts

MAIN EXPECTATIONS PYRETHRUM	MAIN REALISATIONS
Supply of the vegetative material of pyrethrum and new plantations on 165 ha in extension areas	92 ha
225 t increase of the production of fresh flowers	0.5 tons
Installation of 5.500 new dryers (revised to 1.338)	23 dryers
Construction of 28 collecting centres and 4 central storage facility for dry flowers	0 centres

77 t increase of the production of dry flowers	0.1 tons
A total of 280 pyrethrum producers trained in pyrethrum cultivation and drying	62 producers

Table 25. Terraces achievements to forecasts

MAIN EXPECTATIONS TERRACES	MAIN REALISATIONS
1.785 ha of bench terraces are created in 6 districts	1.748 ha
At least 1.500 households registered an increase of their income related to improved agricultural production conditions.	1.800 households
At least 2250 people (about 40% men & 60% women heads of household) are paid for achieving collective works (HIMO).	2.700

3.6. Financial progress

The effective financial progress of STABEX was good. The computation is based on the secondary commitment (adjusted to the effective Inforeuro exchange rate on April 1st 2010) and was 91% for the payment (20.7 million) and 91% for the effective disbursements (20.07 million). The following table summarizes the progress per component and the balance to be paid as compared to secondary commitment.

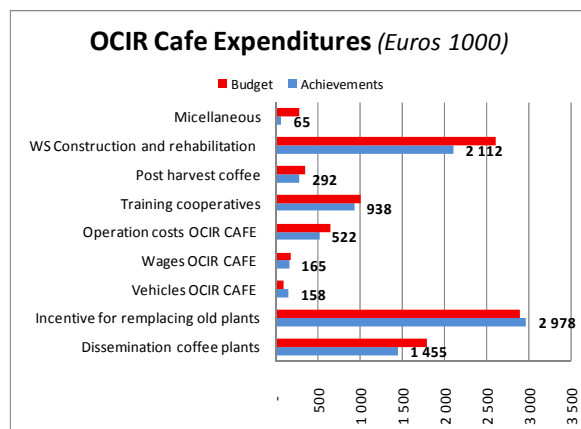
Table 26. STABEX financial progress

Components	2nd comitment at effective exchange rate 31/03/2010	Payment on 2ry comitment at 31/03/2010	RAP	% Paid	Total Disbursed at 31/03/2010	% Disbursed
OCIR CAFE	8 992 639	8 621 686	370 952	96%	8 366 188	93%
ISAR	716 266	676 647	39 619	94%	600 605	84%
total CAFE	9 708 904	9 298 334	410 571	96%	8 966 793	92%
OCIR THE	2 811 395	2 397 747	413 648	85%	2 229 529	79%
PYRETHRUM	652 325	652 325	-	100%	435 584	67%
total PRIVATISATION	3 463 719	3 050 072	413 648	88%	2 665 113	77%
Study Diversification	76 766	76 766	-	100%	76 766	100%
Bench Terraces	3 637 854	3 047 361	590 493	84%	3 047 361	84%
Projects diversification	1 466 976	1 040 384	426 592	71%	1 040 384	71%
total DIVERSIFICATION	5 181 597	4 164 511	1 017 086	80%	4 164 511	80%
total DECENTRALISATION	1 642 934	1 642 934	-	100%	1 642 934	100%
total TECHNICAL ASSISTANCE	2 535 514	2 445 470	90 044	96%	2 445 470	96%
total AUDIT & EVALUATION	349 608	138 798	210 810	40%	138 798	40%
total CONTINGENCIES	46 511	46 511	0	100%	46 511	100%
Total	22 928 787	20 786 629	2 142 158	90.7%	20 070 130	87.5%

The secondary commitment considers the uncommitted funds.

Regarding the diversification projects, payments and disbursements are the same, because it is impossible to verify effective expenditures to date for all projects.

The next graphs are built on the basis of the aggregated PEs for each component, and show weaker progress levels, because the budget have been reported from on PE to another. Actually it simply demonstrates the slow progress at the very early implementation stages. The graphs also show the weight of the different activities for each component.



OCIR CAFÉ - The following chart shows the distribution of expenditures with a large amount spent for the incentive given for regeneration of coffee plants, and WS construction and rehabilitation. The financial progress is 87% of the budget of the 5 PEs. In spite of spending about 11% for institutional support, STABEX funds were predominating in every annual OCIR CAFÉ budget; the expenditures for vehicles (€ 158 500) have reached 150% of budget.

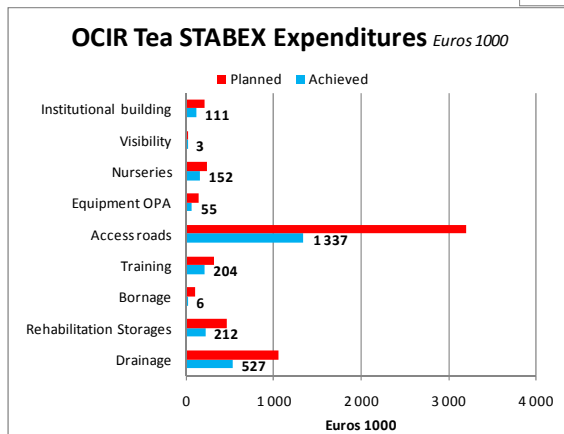
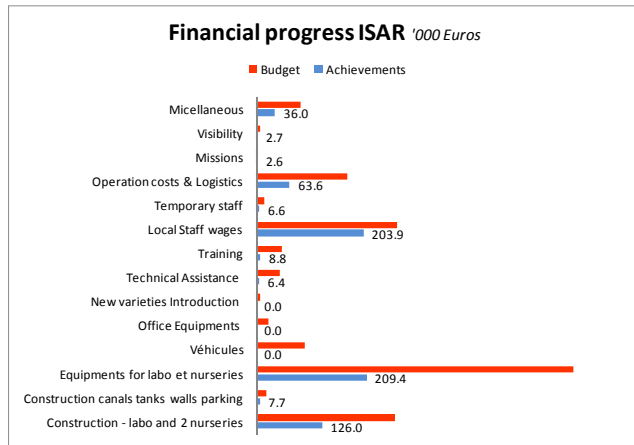
ISAR - To date ISAR has spent 43% of the four PEs. The main reasons to explain this gap are:

The first PE has not been consumed

There were many delays in starting the production of vitroplants

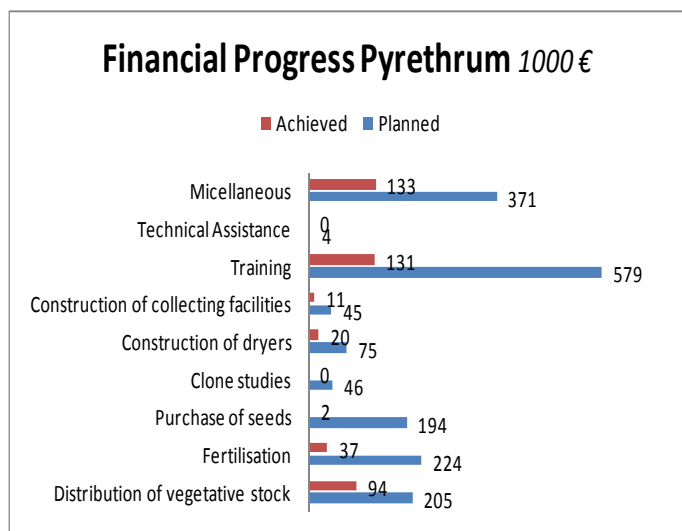
Some budget lines were not utilized

Some unit cost were overestimated in the different PEs



OCIR THÉ - The main budget consuming activity was the access roads with M€ 1.3, and drainage with M€ 0.52. OCIR THE operation costs are reasonable with about EUROS 200 000, which represents 4% of the utilized budget.

PYRETHRUM - The financial progress of the 2 PES has been very weak with 25% of the planned PEs, whilst too much weight (33%) has been given to the project management. There is also a distortion between the planned PEs and the effective achievements: training was the most consuming budget line but achieved only 46% of the budget, and purchase of seeds, which was a key element for expansion, has consumed less than 2% of the budget. The following graph illustrates the poor progress as a result of the lack of coordination between



RHODA and SOPYRWA.

Diversification Projects – the following table summarizes the total expenditures for diversification projects with a total of M€ 1.45, excluding the beneficiary financial contribution of 29% in average.

Table 27. Expenditures for diversification projects

Name of the project	Amount €	Beneficiary contribution
Professionalization potato by using quality seeds	87 643	11%
Production of jasmine and Rose essential oils	81 498	39%
Valorisation and Protection of bench terraces by production of certified potato and pea seeds	100 000	43%
Development Dairy goat and cheese dairy in rural areas	82 881	10%
Reduction of poverty and protection of environment through honey promotion (Nyungwe)	99 591	25%
Intensification and transformation of Soya	96 387	13%
Transformation plant of corn into flour (Akawunga)	68 571	31%
Karongi Sericulture development scheme	78 177	11%
Promotion of modern bee-keeping and honey Plants in the districts Rulindo and Rwankuba	75 481	12%
IKAMBERE Dairy	100 000	47%
Breeding of pigs	90 000	10%
Extensive plantation of macadamia for export	94 938	10%
Reinforcement of bee-keepers capacities around the Nyungwe park	97 143	43%
Integrated fish culture	99 504	39%
Sericulture development project	98 197	51%
Production of vegetables and mushrooms	97 264	10%
	1 447 273	29%

3.7. Stakeholders' roles and capacities

As general assessment, most of the involved institutions show weaknesses in designing their strategy, coordinating with other institutions, monitoring the activities and consolidating information and reporting.

Moreover the high turnover in management does not facilitate the adequate record keeping.

OCIR CAFÉ has been widely supported by STABEX but did not provide according performance.

OCIR THÉ has been probably the most performing institution.

RHODA did not establish a sound consensus with SOPYRWA to have a critical view on the general concept.

RADA has properly implemented the programme but was quite absent in follow up.

CAON has provided an adequate contribution in procedures and financial reporting.

The turnover and the weak involvement of the TA team did not facilitate a sound support; as result a) the TA was not enough dedicated to advise the involved institutions, b) TA reports provide progress data for each component but lack of analytic vision to impulse new strategies, particularly regarding the three export value chains, c) there is no pre-assessment of the potential sectorial impact for the different components.

The EUD has provided adequate support to STABEX, particularly during the last stages.

3.8. Beneficiary implication and participation

The beneficiary implication in decision process, for example in selection of new WS sites was good, despite the high implication of the local authorities. Most of village tea cooperatives also show positive implication in selection of rehabilitation and seem to have the capacity to negotiate with tea estate managers.

The beneficiary contribution in the different components was generally provided in kind, for example to collect and transport raw material in construction sites. For the WS of the coffee component the communities or cooperatives had to provide at least 25% of the total budget. This task entailed some delays, because stones or sand were not always available on the site, and sometimes coop members were not available to timely provide the raw material. For the tea and bench terraces components there was no free of charge contribution in general, since most of the construction works have been undertaken by HIMO. For the pyrethrum component participation has never been foreseen, for example in the construction of dryers. For diversification projects the minimum contractual contribution was 10%, but it has been much better in theory, with 29% on average in the proposals. However recipient contribution for the diversification projects should be usually provided in cash, not in kind as it is the case in many projects; moreover follow up of the community contribution is absent, and the evaluation team could verify that a limited number of beneficiaries have provided their participation.

3.9. Cost efficiency

COFFEE – If we exclude the institutional costs of OCIR CAFÉ, the project was generally cost efficient.

The WS implemented by OCIR CAFÉ are generally at adequate cost (about € 140 000), except the first WS Nyamure that shows a lot of deficiencies: the storage is badly constructed, with unfixed gutters, deteriorated concrete and bad general concept.

The production of coffee plants for the replacement of 80 millions of old coffee trees was made at an average of RWF 12 per plant which is acceptable.

The cost of CDM was quite excessive, with about € 180 per CDM (in total RWF 10 millions).

ISAR VITROPLANTS - ISAR has tentatively compounded the unit cost of vitroplants at RWF 500 per plant, but the evaluation team estimates that the calculation of the unit price comprises many errors, and should not exceed RWF 200. Moreover the strategy to

deliver these plants is absent. Vitroplants should not be allotted at similar conditions as compared to coffee plants (free of charge) that are produced in the traditional nurseries.

OCIR THE has been globally cost efficient, with adequate unit cost per activity, for example rehabilitation of roads, that include some nearly 440 specific road works (bridges and dalots), are below € 10 000, as compared to other projects where similar rehabilitation of earth roads, including drainage canals but without works, are around € 5 000. Since number of works are weighting in the budget, the average cost is good. However the evaluation team has verified that cost vary of at least 50% from one region to another and some works are quite expensive, e.g. the four bridges in Mulindi with a unit cost of € 47 000; however the main reason was the geographical situation of this region, and the necessity for establishing a concrete basement due to phenomena of peat soil depression.

Regarding the training, the unit cost is high, because a large number of trainings have been realised abroad.

Drainage is high because of high variation from one PE to another, and 13% concern 2nd drain buildings. The average cost was 155 € per kilometre for 451 km of construction and 2 961 km of rehabilitation. This cost seems quite high, because the average cost per kilometre³⁹ should not exceed € 70.

The rehabilitation of storages facilities is not really representative because of high quality variation in the different estates. The evaluation team estimates that a significant number of rehabilitations are not in line with the budget. Moreover in some cases it is difficult to verify the improvement.

However, the good overall cost efficiency is mainly due because OCIR THE decided to achieve the implementation under HIMO.

Table 28. Tea Unit cost per activity

In Euros <i>Exchange rate 700</i>	Achieved	Units	Quantities	unit costs
	€ 1000			€
Drainage	527	Km	3411.9	155
Rehabilitation Storages	212	u	148	1 431
Demarcation Ha	6	Ha	2181	3
Training	204	persons	100	2 041
Access roads and works	1 337	Km	137.9	9 698
Equipment OPA	55	coop	11	4 999
Nurseries	152	Plant	7 000 000	0.02

Terraces - The AGRICONSULTING evaluation report suggests that the cost efficiency is not adequate, with € 850 with Tigistes and € 1 250 per hectare without Tigistes⁴⁰, but

³⁹ According to OCIR THE one person can work about 3-5m/day, but it seems adequate for construction, not for rehabilitation, which mainly consists in cleaning canals; in this case one person can easily work about 20m/day. Therefore 2 961 km of rehabilitation at €50 makes a total of €148 050, and 451 km of construction at €200 makes a total of €90 200. The average per kilometre should be €70.

⁴⁰ According to districts cost estimates (and not to actual expenses), the cost of labour force was estimated to RWF 648 137 per ha when 80% of works were done by tigistes, and RWF 940 344 when works were completely done by the population, paid at the average rate of RWF 850.

the present evaluation mission considers that it is in line with a long term investment and given the very hard work to realize 1 hectare of bench terrace, including the installation of anti-erosive plants. Moreover, different studies⁴¹ on terraces costing show that STABEX was more cost efficient with less than RWF 1 million per hectare (cost without Tigiste) as compared to average prices in 2007 about RWF 1.35 million per hectare.

3.10. Monitoring and reporting

The original financing agreement was very vague in terms of monitoring and reporting. Only one chapter (6.2) refers to follow up and control. Therefore, there was apparently no obligation for the different institutions to report or monitor their components and it is understandable that monitoring was the negative side of STABEX. However, reporting and monitoring are current practices under EU projects/programmes and should have been established right in the beginning of STABEX.

The positive side is a) the good financial follow up by the CAON, which has provided accurate and updated data, b) the regular and globally adequate reporting from the TA, even if there was a lack of analysis.

4. Effectiveness

4.1. Achievement of project purposes

4.1.1. Beneficiaries

Due to a lack of precise information, the number of beneficiaries of STABEX is not measurable, data being often inexistent or not trustworthy. Obviously, neither the technical assistance, nor the agencies involved in the programme have been interested in priority in the beneficiaries, but rather on production and yields issues.

Figures are, therefore, currently varying from about 60.000 to more than 200.000 beneficiaries, depending on different sources and calculation methods:

- For the coffee sector, the addition of different TA reports leads to a number of about 16.200 direct beneficiaries. Without re-plantation and fertilizers, OCIR CAFÉ is estimating the total number of beneficiaries at 32 374. Nevertheless, when taking into account some 20 million coffee trees distributed at an estimated average of 50 trees per producer, (in fact, the average number of trees per plantation in Rwanda is estimated at 183 by the Coffee Census 2009 and only about 25% would have been replaced), we would obtain 400.000 beneficiaries. According to OCIR CAFÉ, all the producers of the country (precisely about 400.000) would also have received fertilizers from the STABEX. However there was an evidence of concentration on larger farms, thus this figure is questionable

All other costs are similar, with or without tigistes. The average cost of labour is estimated RWF 842 942, with the use of tigistes (for 80 % of the labour force), these cost amount only 77 % of the cost with 100% of the general population

⁴¹ Prioritizing Rural Public Works Interventions in Support of Agricultural Intensification, Luuk Fleskens for IFDC and HELPAGE, June 2007; Rwanda.

- Concerning the tea sector, it is possible to estimate the number of direct beneficiaries to about 20 572 members of the cooperatives in those estates that benefited from road and drainage rehabilitations.
- For the bench terraces, the AGRICONSULTING report mentions 1 800 households directly benefiting from additional incomes from increased productivity on new terraces and 2 700 indirect beneficiaries, persons from revenues on terraces works, thus representing a total of 4 500. But according to the very last official data provided by RADA they would actually be 20 572, including 8 747 men and 11 825 women.

As a conclusion, despite all the attempts to estimate direct beneficiaries of the STABEX programme in Rwanda, the mission team failed to provide even an approximation of this number. The following table provides a tentative consolidation of beneficiaries.

Table 29. Coffee Beneficiaries

Number of Beneficiaries	Indirect Institutional	Direct farmers
OCIR CAFE	25	16 186
ISAR	5	-
OCIR THE	3	29 054
PYRETHRUM	2	62
TERRACES *	2	9 268
DIVERSIFICATION PROJECTS	2	5 042
DECENTRALIZATION	NA	NA
Total	39	59 612

* For the bench terraces the number of workers was 20 572 of which 57% women.

4.1.2. Generated Added Value

The added value can be measured economically at macro level, at least for two value chains, coffee and tea. When measuring the net weight of exports in comparison with the total investment for the tea component one can conclude that it has been a profitable investment. Undeniably tea exports annual added value was M€ 3.3 for an investment of M€ 2.2.

Table 30. Added Value Tea

Year	Revenue M\$	Exchange €/ \$	Million €	Change
2004	22.6	1.2246	18.45	-
2005	20.3	1.2472	16.31	- 2.136
2006	32.6	1.2839	25.40	9.091
2007	34.8	1.342	25.91	0.513
2008	44.9	1.5551	28.90	2.990
2009	48.7	1.3856	35.16	6.254
Total Added Value M€				16.712
Added Value per year M€				3.34
Investment M€				2.23

At the contrary, Coffee exports show an annual added value of M€ 0.11 for an investment of M€ 8.97, which looks very weak.

Table 31. Added Value Coffee

Year	Revenue M\$	Exchange €/ \$	Million €	Change
2004	32.3	1.2246	26.38	-
2005	39.1	1.2472	31.35	4.974
2006	54.0	1.2839	42.06	10.709
2007	30.2	1.342	22.50	- 19.556
2008	46.7	1.5551	30.03	7.526
2009	37.3	1.3856	26.92	- 3.110
Total Added Value M€				0.544
Added Value per year M€				0.11
Investment M€				8.97

The overall added value for the two components is M€ 3.45 for an investment of M€ 11.20.

Regarding the other components: a) the pyrethrum added value does not result from STABEX, b) Terraces, Diversification projects, and Decentralization will provide long term effects.

4.1.3. Achievements to the needs

The main question in this context is the following: as implemented, what is the likelihood of the STABEX specific objectives to be achieved as envisaged and verified by the Objectively Verifiable Indicators (OVIs)?

Rwanda is currently ranking at the 26th position for African coffee production. The first producers in the world, like Brazil, Vietnam, Indonesia and Colombia are all selling 100% of washed coffee. Even if Rwanda produces 100 times less than Brazil in terms of quantity (about 400.000 t green coffee to be compared to 40 million tons), it must approximate the same quality and seek for niche markets in the coffee sector. The need for better quality is, therefore, compulsory.

Concerning the **coffee** sector, three specific objectives were targeted: Improve the productivity of the coffee plantations, the labour productivity and the added value of green coffee resulting from higher quality level.

Related OVIs are in line with those objectives:

- The raise of the quantities of parchment produced by tree, planted surface or production unit;
- The improvement of the labour productivity;
- The growth of the quantities of fully washed coffee and
- The augmentation of washed coffee benefiting of an added value due to higher quality.

The figures proposed by the censuses of 1999 and 2009 concerning the coffee sector are the only ones at our disposal for trying to measure the productivity of the coffee plantations and the related labour productivity.

With 60.000.000 plants in 1999 for a total production of 18.205 t, we obtain a productivity of 3,29 kg/ coffee tree, against 3,43 kg in 2009 (21.000 t for 72 063 912 trees). Considering, however, the approximate nature of the figures, the observed

difference is not significant enough for concluding that the specific objective to improve the productivity of the coffee plantations has effectively been reached.

The same is true for the labour productivity: when dividing the 60 millions plants by the 400.000 producers identified in 1999, that is to say an average of 150 trees, the productivity was reaching 122 kg per producer. In 2009, the same calculation is showing a productivity of only 115 kg.

Nevertheless, the potential error margin due to the uncertainty of the data does again not allow to definitely concluding in the way of a decrease of productivity. In fact, for both results related to the productivity of the coffee plantations and labour it looks much more that changes, if any, are not really significant.

In addition, the objective of an exported production of 37.000 t has not yet been achieved as only 21.000 t were exported in 2008.

Regarding the objective of increasing the quality of the coffee produced, six main achievements should be underlined:

- Before 2003 almost all the production was semi washed, whereas in 2009 23% is fully washed, thus meaning that the objective of increasing the production of fully washed coffee is currently positively on-going;
- Instead of 2 washing stations (WS) in 1999, not even actually productive, 185 WS are currently existing and running in Rwanda;
- The production of more than 83 000 000 of seedlings (certified seeds provided by the ISAR station) have been financed by the STABEX;
- Millions of new coffee trees have been replanted;
- The ISAR in vitro lab is currently operational and has started the production of a large quantity of coffee trees embryos, with higher productivity and quality;
- Finally, 5 quality control laboratories should be established with the support of STABEX, for improving the quality control of the coffee and providing decentralised advices to the WS throughout the country.

Despite those significant efforts on the quality side, many weaknesses still remain:

Concerning the WS, it should be noticed that, despite their increase in number, their productivity remains quite low as they have processed only 4.800 t for a theoretical processing capacity in equivalent parchment of about 16 550 t, which means that they are working on average at 29% of their capacity.

Considering that losses are estimated at 30% in nurseries, 10% during the transaction, including transport and at least 10% during the replanting, the 83 million of seedlings should be qualified. They could, however, represent some 40 million plants.

Nevertheless, as far as re-plantations are concerned, it is currently impossible to provide any exact figures, as they are varying from less than 20 million (STABEX technical assistance report 2009) to an estimation from 40 to 80 and even 110 million according to the interlocutors of OCIR Café, who obviously have no clear idea on the issue.

The census of 2009 (census p.32) has found about 17,5 million young trees of 6 month to 3 years, amongst the total of 72 million coffee trees estimated in the country. Even if considering the existence of trees of less than 6 months, it is difficult to imagine that

they could represent such an amount that we would be able to reach much more than 40 million young trees.

In addition, the census of 2009 noticed a proportion of aging trees above 30 years old varying between 32% and 49% depending on the District, except in the Districts of Nyaruguru and Muhanga in the Southern Province with respectively 22% and 21%. The census has also shown significant variations in terms of rate of productive coffee trees/Province, those rates varying from 65% in the Western Province to about 37% in the City of Kigali (36.8%), which may also induce differences in terms of plantations' productivity from one District to another.

Due to the needs in terms of quality, the establishment of a vitro lab appears relevant, although, as regards the ISAR in vitro lab, one should take into account that the overall process takes about 18 months, including the production in nurseries, thus meaning that it will take some time before the lab will reach its cruising speed. To date about 32 000 explants have been produced of which 3 500 in nurseries. It should also be added that despite a protocol has been signed in which the OCIR is committed to buy the vitroplants to ISAR, the quantity (500 000 plants) has only been clarified in the PE but is absent in the protocol and the price level of each plant hasn't yet been clarified.

In conclusion, despite the objectives related to productivity still remain to be improved, evident progress has been registered in terms of quality with the support of STABEX and the efforts appear to have been very pertinent as many WS have been able to deal beyond the 3.4 USD/kg green coffee (minimum calculated by OCIR Café in 2009) with prices often ranging from 4 to 7 USD/kg. In addition, for the post harvest, the presence of WS have helped saving a lot of time for the producers due to less involvement in the processing, drying and care taking.

Concerning the **tea** sector, the specific objective was to set up adequate conditions to facilitate the privatisation process. For measuring the achievement of this objective, 5 OVIs have been defined:

- The growth of tea production;
- The extension of cultivated tea areas;
- The augmentation of tea production/ha;
- The rise of the selling price per kg green leaves;
- The increase of the selling prices of exported black tea.

Tea production of green leaves has actually been evolving between 2003 and 2009 from 67 000 tons to 87 000 tons, while the cultivated tea areas increased from about 12.300 hectares in 2005 to 16 300 in 2009, partially due to the creation of 6 new estates in Karongi, Gatara, Rutsiro, Mushubi and Muganza-Kivu. Simultaneously, the tea production/ha increased significantly from 5.7 in 2003 to about 7 tons in 2007, 2008 and 2009, thus showing that it has not changed since 3 years.

The increase of the selling prices is largely dependent on the quality. Currently, the average tea farm-gate price for one kg green leaves is between 86.6 and 96.6 RWF, to be compared to 45 RWF in 2003. However, in real terms (including inflation rates since 2003) this augmentation only represents an increase of 12.6%. It should be noticed that the relatively low standard quality provided by farmers at maximum 70% (delivered at the plant) is an obstacle for higher prices.

The selling prices of exported black tea have increased by 52% between 2003 (1.55 USD/kg) to 2.59 USD in 2009, without taking into account inflation rates and numerous variations of currency exchange between the US dollar and the Rwandan Franc. When considering the average exchange rates between 2003 (1USD for 525.5 RWF) and 2009 (1USD for 549.8 RWF), the increase is even higher: 817 RWF/kg in 2003 against 1.485 in 2009, i.e. 81.8%. In real terms (taking inflation into account), however, this percentage has to be reduced to 8.9%.

It should also be mentioned that Rwanda produces exclusively ordinary black tea with a quite poor marketing strategy, which has a direct incidence on the level of the export prices. However, the mission team has noticed some interesting variations to those average figures, a good example being the Kitabi tea estate: since its privatisation, the estate has been able to negotiate prices between 3.5 and 5 USD/kg, with the auction tea in Mombassa. The fact it has been certified ISO is probably an asset in this context.

It seems not possible to estimate the part taken by STABEX in the OVIs, as they depend from many endogenous and exogenous factors. Despite the wording of the specific objective, one cannot say that STABEX has been “facilitating” the privatization process as such, rather more has STABEX accompanied this process.

The most important activity planned by STABEX in terms of privatisation was the demarcation of plot boundaries and mapping, but it was only planned for 3 estates (Shagasha, Mata & Kitabi), and for the one visited by the mission team (Kitabi estate) the manager of the plant estimates that the demarcation of plot boundaries has not been properly undertaken, since it did not involve a negotiation to clearly segregate the industrial block from the cooperative plots, which are presently inserted inside the estate.

The second condition was to set up adequate infrastructures for tea cooperatives and estates, through improvement of access roads, drainage and collecting centres. There was a real need for drainage and access roads and the planned activities have contributed to accompany the privatisation process, because the key elements like the quality of the plants and the size of the industrial plot were already established. In conclusion, the conditions were met with or without STABEX.

As far as **pyrethrum** is concerned, the specific objective was to increase the quantity and quality of the production in the targeted regions of Byumba, Gisenyi et Kibuye.

The related OVIs were the following:

- The growth of cultivated surfaces (150 ha foreseen under PE1 plus 110 ha under PE2);
- The increase of pyrethrum production by ha;
- The augmentation of the quantity of pale extract per kg of dried flowers;
- The rise of selling price per kg pyrethrum

The results could be summarized as follows:

- The growth of cultivated surfaces only reached 43 ha (28,7% of target) under PE1 and 49 ha (44,5% of target) under PE2;

⁴² Source: InfoEuro

- The total production of dry flowers have decreased from 1.300 t in 2004 to 209 t in 2008 (- 84%), but have risen at 371 t in 2009, showing a slight resumption, which will have to be confirmed in the future.
- The production by hectare in the targeted regions is not available, but some figures showing a significant decline in production can be provided for the 15 ha in 3 sectors of Karongi⁴³, which have produced 148 kg of dried flowers under EP 1 and only 30 under EP2, which means a production variation of 10,6 kg/ha (EP1) to 2 kg/ha (EP2), due notably to availability of seeds out of season and the relative demotivation of the producers;
- After a significant decrease of pale extract from 24.1 t in 2004 to 3.9 t in 2008, the production is rising again at 6.9 t in 2009, due to the fact that the new owner of SOPYRWA restarted to refine pale extract within a new refining unit. Pale prices are quite promising, as they have doubled between 2007 and 2010, from USD 125 USD to USD 250 per kilogram of pale extract.
- Finally, the mission team noticed a significant increase of selling price per kg pyrethrum at farm-gate from 400 RWF in 2005 up to 1.000 RWF today, perhaps partially as a result of the rarefaction of the product.

In conclusion, the pyrethrum programme appears to have been quite disappointing, having largely failed in reaching its specific objective. Since the most important needs were related to the traditional area, the extension of pyrethrum production in new areas, located far away from the heart of the traditional production region, cannot be considered as a relevant choice.

Regarding **bench terraces**, the specific objective was aiming at improving the incomes of the population concerned through terracing with a focus on high intensity of labour and a consequent increase in agricultural production. The related OVI is the increase of agricultural yields. Six districts totalising around 1.800 ha were concerned by STABEX financing : Burera, Gasabo, Karongi, Nyabihu, Nyaruguru, Rulindo

This part of STABEX having already been evaluated in March - April 2010⁴⁴ it doesn't seem necessary to insist on this issue. The main point concerning the OVI is that the increasing of agricultural yield is not measurable so far, because the concerned terraces are not yet in production. More significant is probably the statement made by the mentioned evaluation (p.77) that "as regards to productivity increase, no base line is available", which will hinder any further analysis on the subject.

Nevertheless, one could have found some relevant information in previous evaluations⁴⁵ showing that in many cases production yields are multiplied by 3 to 5 on bench terraces benefiting from appropriate cultivation practices and manure.

⁴³ Under EP1, only Gitezi and Mutuntu were concerned, with respectively 5 and 9 ha (total 14 ha), whilst under EP2, 7 ha were planted in Gitezi; 2 in Mutuntu (i.e. a decrease of 7 ha!), and 6 ha in Rwankupa (total 15).

⁴⁴ Évaluation, étude d'impact et analyse Ecofin du Programme de terrassement radical Rwanda COM STABEX 96-99" – Final Report (Draft version), May 2010 by Luc Grandjean & Baudouin Michel.

⁴⁵ For example : Evaluation technique et d'impact socio-économique des projets de développement des districts financés par le Fonds Commun de Développement – novembre 2007. This evaluation covers the period 2003 – January 2007. Also see : Evaluation et analyse EcoFin conjointe des programmes UBUDEHE et Appui aux Districts du DPRPR – Rapport Appui aux Districts – Rapport final – Juin 2010, par Gilbert Germain et Célestin Mboukem.

The **diversification component** has as specific objective to foster new local initiatives that are linked with the agricultural sector and, as related OVI, the number of new initiatives identified in this context.

The call for proposals was launched in 2008 and 120 proposals have been recorded of which 60 pre-selected and 16 awarded. In so far, the OVI can be considered as achieved. However, in addition to the number of projects, it would have been more significant to have an OVI dedicated to the quality of the selected projects. As a matter of fact, the appreciation of the mission team is very mitigated on this issue, with 4 out of 11 assessed projects considered as critical or very bad (25%), 3 of them having even failed because of embezzlement; 2 as “medium”; 3 “good” and only 2 “very good” or “excellent”.

Most of the problems encountered are related to weak management capacity and morality of promoters and insufficient follow up missions to control the viability of the projects.

Concerning the **decentralisation component**, the STABEX has supported two projects:

- The continuation of activities undertaken within the first phase of the Project for Social Infrastructure including the establishment of rural development programmes and social actions identified by the grassroots, represented and supported by the Community Development Committees;
- The implementation of certain activities of the National Programme of Poverty Reduction within the Ministry of Finance.

The financing of the STABEX dedicated to the National Programme of Poverty Reduction was aiming at supporting the Ubudehe approach, a Rwandan system of intra-community co-operation based on collective and individual actions. Embedded in the Rwandan ancestral culture, Ubudehe was developed within the framework of the decentralisation process initiated in Rwanda in year 2000 and the preparation of the first Poverty Reduction Strategy Paper (PRSP1), at the end of 2001 and beginning of 2002. This development was based on a participative evaluation on the situation of poverty (Participatory Poverty Assessment / PPA) in all the Cells of the old Districts/City of the former Butare Province, as well as an evaluation within a sample of each old Sector in the existing 11 provinces (Consultative Poverty Assessment/CPA).

Under the broad perspective of poverty reduction, the EU provided 1 M€ funding in 2002 for the implementation of a pilot phase of Ubudehe in the former Butare Province. In this context, a Programme Estimates (PE) was signed with the MINALOC on April 15, 2002, for a period of validity of one year.

The essence of the methodology of Ubudehe was that the principal beneficiaries, those living below the poverty threshold, participate in prioritising rural development in their locality and in implementing micro projects related to those priorities. Experience gained in previous Rwandan decentralisation programmes financed by the EU and others had actually justified the approach of working in a participative way with the beneficiaries. The pilot Ubudehe project in the Butare province was to learn how best to undertake this exercise. In June 2003, two evaluations provided positive feedback suggesting principally that funds spent at Cells level should essentially fund collective actions. As a matter of fact, the Butare Ubudehe experience has shown that too many projects (probably more than 75%) were targetted on acquiring goats, which was not precisely in line with the collective approach and philosophy of Ubudehe.

Subsequently, the EU funded two further phases of the Ubudehe programme (2005-2006 and 2007-2008) rolled out nationwide through the Decentralized Programme for Rural Poverty Reduction (DPRPR - 9th EDF), in addition to the “Support to the Districts” programme (Programme d’Appui aux Districts / PAD).

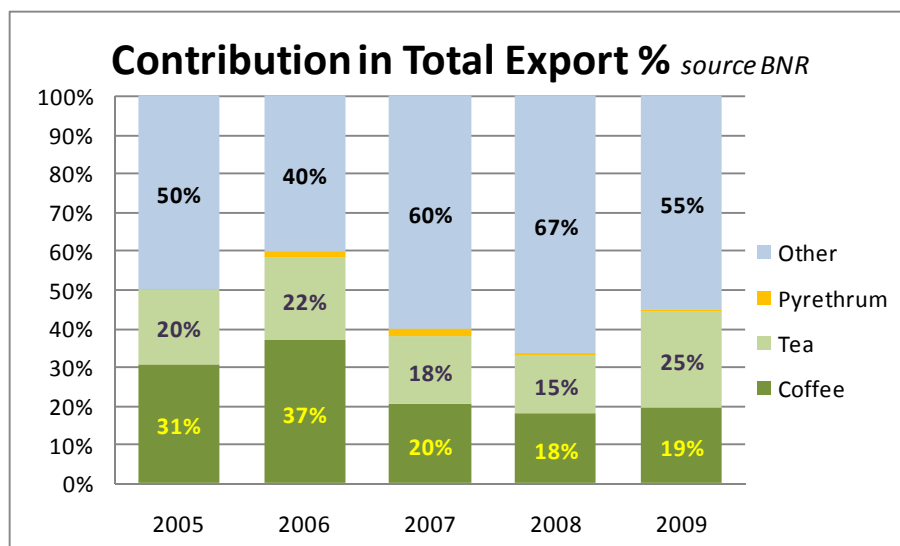
The final evaluation of the Ubudehe programme⁴⁶ has shown its high relevance towards beneficiaries’ needs as well as its consistency with the different Poverty Reduction Strategy Papers and the reform initiatives being undertaken by the government of Rwanda.

In terms of effectiveness, at least 1.4 million people (the lowest estimation) have been direct beneficiaries of the overall Ubudehe programme, thus leading to the conclusion that probably at least 20% of the population of Rwanda has benefited from the programme if including potential indirect beneficiaries into the scope. In so far, the programme was considered as a great success.

5. Impact

5.1. Macro Economic Impact

STABEX has contributed directly and indirectly to increase the export value of coffee, tea and to limited extend for pyrethrum. The increasing contribution of coffee and tea is not visible, whilst the total value in current USD value of 36.5%, because other commodities, mainly minerals, have increased twice in current terms of 71% between 2005 and 2009. Hence, in real terms (constant currency) the increase was 38.2% for coffee and tea and 72.5% for other commodities.



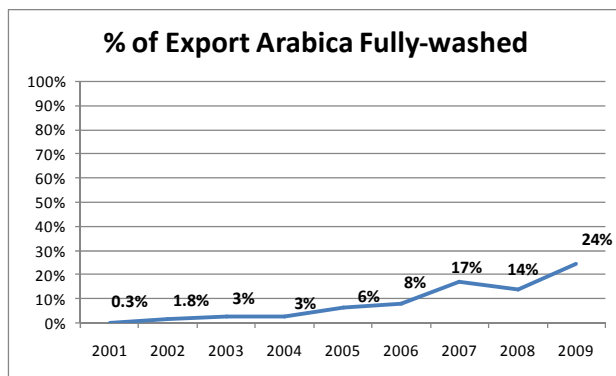
⁴⁶ See Final evaluation of Ubudehe, June 2010, by Gilbert Germain and Célestin Mboukem.

5.2. STABEX Impact on the different value chains

5.2.1. Impact on Coffee

With STABEX, the Government decided to set up its new vision and strategy, which was already adopted in 1998, and to boost the coffee value chain. The objectives became the improvement of quality standards and a better share of profits at all levels of the value chain. Effectives actions started with a target of 37 000 MT of green coffee, of which 60% as fully washed. OCIR CAFE had realized a census of producers in 1999 showing 400 000 producers with 60 millions of plants and a total production of 18 250 MT.

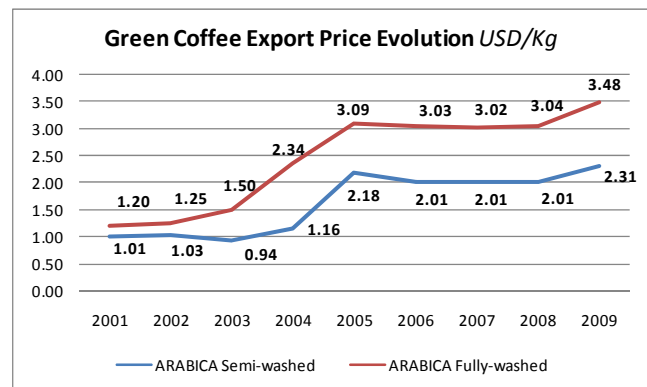
The high development of processing in Rwanda, up to 185 WS of which 100 are hold by cooperatives and 85 by private persons, gradually changed the market position of the country with higher possibility to negotiate directly with buyers. Prices that are directly negotiated by the WS have significantly increased during the last two years and some WS are able to negotiate between 4.5 and 7 USD per kilo of high quality green coffee. This change is very significant and can be partially accredited to STABEX. Hence this is the demonstration that quality improvement was the best way to promote Rwandan’s coffee on the international markets with higher standards, and ensure the sustainability of these WS in a long term run.



The following graph illustrates the share of fully washed on the total production. It may also explain why the Rwandese coffee is more and more appreciated, in particular but not limited to the increased share of exported fully washed. It is likely that the improved quality from cooperatives producing fully washed obliges also the other producers to improve their quality, even for semi

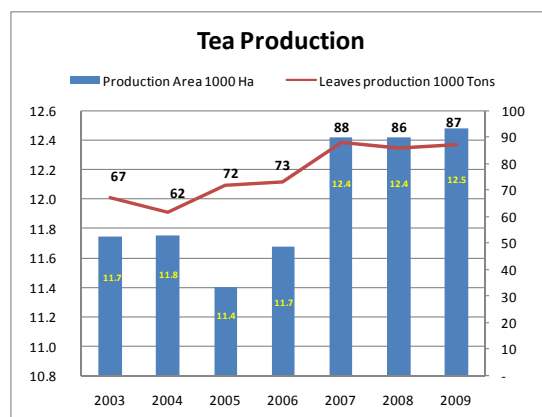
washed, as a snow ball process. Before 2003 almost all the production was semi washed whereas in 2009 24% is fully washed.

As result the prices have evolved rapidly since 2003 and the differential between semi washed prices and fully washed prices is regularly increasing from less than 20% in 2001 to more than 50% in 2009.

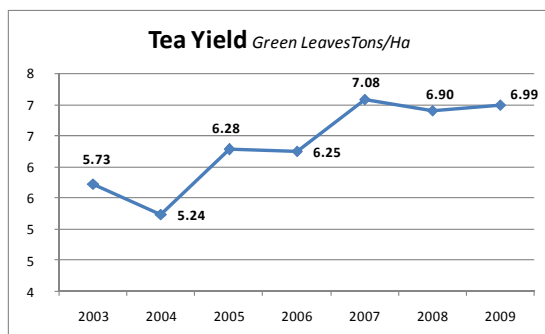


5.2.2. Impact on Tea

The production of green leaves evolved with the area during the STABEX period from 67 000 MT to 87 000 MT. According to OCIR THE, the extension of extra areas was by



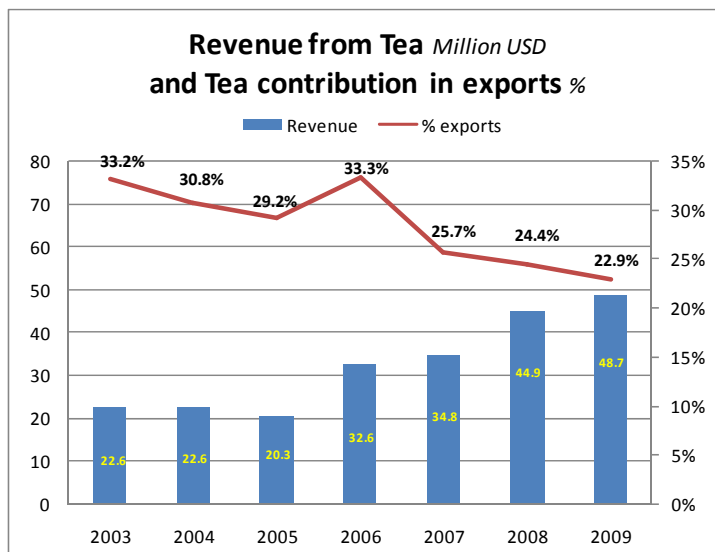
7 000 ha from the existing 11 700 ha in 2003⁴⁷; and according to the interviews new areas will be extended within the existing estates in the future.



But the most interesting is the significant increase in leaves per hectare, from 5.7 MT to 7 MT. however it is estimated that yields still remain weak as compared to the potential 8 MT of green leaves (wet tea). Yields also vary according to the areas, for example between the valleys and the hills. The objective of the government to improve the quality is probably the most relevant, since a number of plants still receive low

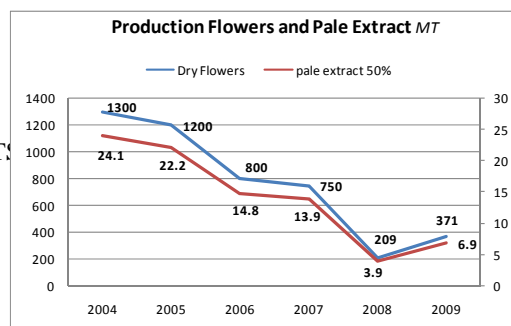
standard quality provided by farmers at maximum 70% (delivered at the plant). The other issue is that Rwanda produces exclusively ordinary black tea with a quite poor marketing strategy.

Tea exports have significantly increased by 2.2 between 2003 and 2009 and it is likely that this evolution will be pursued with the new areas. Although the contribution of tea in total Rwandese exports decreased from 33% to 23%, because export of other commodities, such as minerals, have also significantly increased, the good results of tea likely result from the privatization process in which STABEX was involved.



5.2.3. Pyrethrum

In 2007 it was estimated that pyrethrum covered about 3200 hectares but the



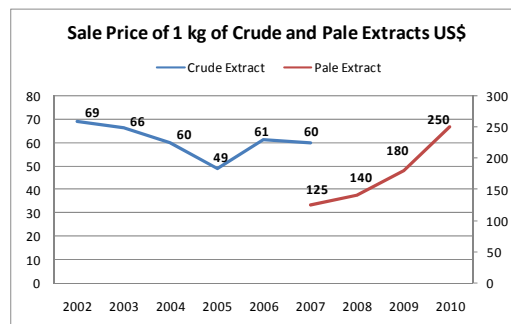
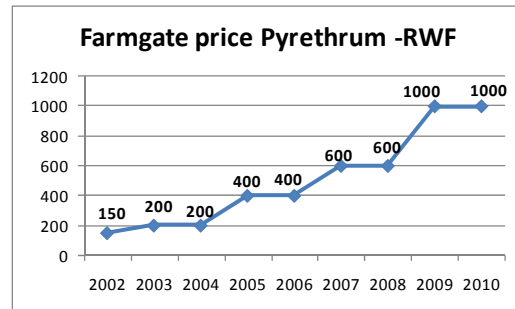
⁴⁷ Partially due to 6 new estates KARONGI, GATARE, RUT...

production was below the high score of 6 350 tons of fresh flowers in 1999, which means 1 270 tons of dry flowers. There was a drop in production of dry flowers and pale extract between 2004 and 2009, but since the new owner started the refined pale extract process SOPYRWA contributed to restart the production in 2009 and it is expected to have high projections in 2010 and 2011 due to the increase in acreage from 1500 ha in 2009 up to 3000 ha. The average productivity is 250 kg/ha.

The implementation of the new refinery allowed SOPYRWA increasing significantly farm-gate prices for dry flowers, from RWF 600 in 2007-2008 to RWF 1000 in 2009 (about 2 US\$). However the STABEX did not contribute to this output.

The strategy that was adopted by the new owner of including a refining unit in 2007, with the assistance of the government, was very relevant, since crude prices were not so attractive whereas pale prices were very promising, doubling between 2007 and 2010, from USD 125 USD to USD 250 per kilogram of pale extract⁴⁸.

Therefore pyrethrum recently provided a real added value due to the new strategy of SOPYRWA, and it is assumed that the international market will probably be more attractive in the future.



5.3. Social Impact including benefits for the poor and reconciliation

STABEX has a socio impact in terms of improvement livelihood, reinforcement of cooperatives, increase of purchase power, reinforcement of negotiation capacity, women empowerment, and reconciliation.

Coffee - On the economic point of view, a coop without a WS produces semi-washed coffee with old manual machines of little value added quality. The sector needing important amount of money in a short period of time (March to June-July), between the beginning and end of the picking, processing and marketing of the coffee, many intermediaries are chasing the families which, in case of urgent need of money, are ready to sell at any price. In the traditional environment it is, therefore, not unusual to see the coffee directly sold in the fields, before the production, by agents who underestimate its value. The socioeconomic impact of such practices helps more

⁴⁸ The processing includes 3 phases : 1) the flower crushing, 2) the extraction, 3) the refinery. We get 20% of dry flowers from 1kilogramme of wet flowers with a PY rate of about 1.3 in Rwanda. At the end of the process the rate is between 70% and 80%, but it has to be diluted in a solvent and reconverted to 50% for commercial purpose.

maintaining the level of poverty in the countryside than improving the living conditions of coffee producers.

At the contrary, the existence of a well managed WS is a guarantee for the producers to sell their coffee cherries at the best possible local market price, thus supporting the progress of living standards. It also represents a guarantee for the banking sector, which feels much more comfortable for lending.

In addition, such processing units are progressively initiating significant social changes. As a matter of fact, cooperatives benefiting from a WS need a higher level of organisation and management, necessarily leading to evolution of mentalities. It certainly is too early to state that a spirit of entrepreneurship is being born in the coffee sector, as a majority of coffee cooperatives are too young and their management capacities still in their infancy, but the general trend for those coops is to enter into the logic of economic efficiency or to fail. Some cooperatives met by the mission team have clearly integrated this new deal and already reinforced their management staff (Board of Directors; supervisory board, etc.).

Moreover, the fact to earn more, inducing higher livelihood standards and the possibility, for example, to send children at school, most likely have an impact on the way of thinking. In this context, a potential influence of schoolchildren on their often uneducated parents should probably not be underestimated. In the same way, proper training increases the capacity of trained individuals to better reflect on improving their agricultural practices and management. There are, thus, some positive factors currently influencing the evolution of mentalities and ways of thinking, which are progressively impacting the sector.

Furthermore, the vice-chairman of the coop ABURWAGASABO (New WS MUNUNU - Gasabo) underlined the positive effect the WS would have on the reconciliation process: "Meetings between coop members are organised, but despite the activities within the cooperative are positive steps on the way to reconciliation, WS members will be much closer around common interests." The positive impact of working together⁴⁹ has also been underlined in other washing stations. So the vice-chairman of the cooperative DUTEZIMBEREKAWA, working on the WS of Nyamure: "The WS reinforces the coherence of the coop and our members begin to perceive a common interest in working together, thus facilitating the reconciliation process."

On the socioeconomic side, a WS necessarily makes use of local manpower, even seasonal. The mission team has noted that in average a WS has about 3 to 5 permanent staff, whilst seasonal staff may vary from 20 to more than 80 workers, depending on the size of the WS and according to low versus high production and processing seasons.

⁴⁹ This positive impact had already been noticed on HIMO works and within the Ubudehe programme. See « Evaluation et analyse ECOFIN conjointes des programmes d'appui à la réinsertion économique et sociale des démobilisés de la ville de Kigali (PARES) et de la partie « haute intensité de main-d'œuvre du volet « Appui aux Districts » du DPRPR – Par Baudouin Michel et Gilbert Germain – Rapport final, juin 2009, p. 46: "It is remarkable to note that in second position, just after the generation of incomes, job creation and the fight against poverty, the questioned people quoted to 25% unity and Community reconciliation like one of the most positive aspects of the LIRPW programme." Also see "Evaluation et analyse ECOFIN conjointes des programmes UBUEHE et Appuis aux Districts du DPRPR », par Gilbert Germain et Célestin Mboukem, p. 38 : "With 88.7% of answers affirming a "great" and even a "very great change" in terms of social cohesion, we register one of the main successes of Ubudehe in terms of social impact."

Usually, 1kg coffee cherries is paid around 122 RWF in 2010 to which 23 RWF are added for the purchase of fertilizers (paid by OCIR CAFÉ and given to the producers), which means a total of 145 RWF. It is not unusual, however, to observe higher prices, particularly due to the competition between several WS located in the same area. In so far, the producer can get more attractive prices thanks to the existence of washing stations. Simultaneously, he is saving time on the processing and drying stages, which before had to be done manually at home. This allows him to invest more time on other activities and agricultural productions. It is, therefore, not really surprising to listen that someone who earned 200,000 RWF before the WS is actually in a position to get 250,000 with less effort, as the mission team was told by a woman working at WS Buffcoffee.

At the new Mununu WS (Gasabo), until recently the merchants came to buy the cherries directly from the producers at a price of 130 RWF/kg, which represents a loss of 30 RWF/kg compared to their local market price now reaching 160 RWF/kg. The coop is, therefore, expecting the selling prices to increase of at least 30 RWF/kg thanks to the new WS.

At Buffcoffee, the private owner (a woman) has paid 130 RWF/kg of coffee cherries to the producers in 2009 and is paying 160 FRW this year (+23 FRW / kg for manure). In addition, she intends to give a premium to the cooperative of producers of 5 FRW / kg if profits permit this year, the reason being the high competition to purchase cherries. By doing so, the owner not only wishes to keep her suppliers, but is actually acting as a coop!

At Maraba WS, they have paid in 2009 a minimum price for cherries at 150 RWF/kg, i.e. higher than the indicative price of 145 RWF, because they do not retain for fertilizers and have a good reputation. They were awarded in 2002 as 1st quality WS in Rwanda. They also pay 15 RWF/kg at the end of the season.

In addition, when a coop sells coffee at a higher price than the average market one, incentives are distributed to its members. There is no doubt that the increase in incomes concretely means a rise in the everyday life of those affected: payments of health insurance, education of children, clothing, changes of habitat (solid materials), etc. are facilitated. Many producers have also underlined that the fact they are selling their coffee cherries to the WS, which afterwards stores the parchment, has increased the security by avoiding thefts, rather frequent before.

Wages for permanent and seasonal staff is varying from one WS to another, but also according to the type of activity. At Buffcoffee, salaries are ranging from 600 RWF/day (drying, sorting ...) to 800 RWF (fermentation tanks). The total wages for this WS amounted to 7 MRWF in 2009, which were re-injected in the local economy. During the high season (about 1.5 month in spring), the work is going on 7 days a week.

Example at Bufcoffe WS:

Mr. Savio M., seasonal worker for processing and maintenance, single, is working 150 days/year at RWF 800/day, (MRWF 1.2/year). Before the existence of the WS he was full-time farmer and did not have any other job. With his wages he has been able to buy a cow, build a house and save some funds.

Three young villagers, single, also working 150 days/year at RWF 800. Their parents are coffee producers in the same village.

- *Miss Véronique M.: 24 years, working since 2006 at the WS. From her income, 25% are saved on a bank account. She bought 4 goats and 3 sheeps and provides assistance to her parents. The others 6 months she produces and sells Sorgo beer.*

- *Miss Pélagine M.: working since 2009 at the WS. From her income, some 25% are saved on a bank account, and she bought 1 goat and 2 pigs.*
- *Miss Francine D.: working since 2008 at the WS. From her income, also about 25% are saved on a bank account, and she bought 1 pig, and provides assistance to her parents.*

For all three this job is significant, as there is no other employer close to the village.

Two married women, Mrs. Judith M. and Mrs. Zeburiya N.A, are producing coffee with their husband and simultaneously working at the WS for sorting the parchment:

Before the washing station, people in the village used to sell to the same person currently owning the WS, they said, but the income increased by 20% with the WS, whilst requiring less efforts (pulping and drying are not anymore made at home). Both confirmed saving approximately 50% of their income. With their earnings they are able to pay the health insurance, school expenses, student fees and all daily needs. In addition:

- *Judith has built an annex to her house and is investing about 25% of her wages for purchasing live-stock when prices are low, to resell them in the peak season.*
- *Zeburiya has 600 coffee-trees today. With an average estimation of 5kg of cherry per tree, she gets at least 3.000 kg of cherries, i.e. 600 kg of parchment. The 480.000 RWF she earns with her cherries, are to be added to her salary in the WS.*

As a conclusion: there is no doubt that the WS largely takes part in the capitalization of the village, in which it is the first employer.

In Rulindo, the WS currently employees 4 permanent staff (1 at 40.000 RWF/ month, 2 at 35.000 and 1 at 30.000) and between 20 seasonal in low season and 27 in high season paid 700 RWF each/day. The staffs are paid on the credit of 49 MRWF taken for the 2010 production campaign (around 14MRWF estimated wages for 2010).

Before the establishment of the WS, the coop counted 1.200 members, but when it was to decide about the 25% contribution of the members for the construction of the WS, only 46 were ready and in the position to pay for, thus increasing their social part in the coop from 7.000 to 225.000 RWF. This actually helped reaching a total contribution amount of 10.350.000 RWF, however far away from the 28.8 MRWF normally requested (25% of 72 MRWF financing of the STABEX).

More importantly for the social impact, this example shows that the coop will be held by wealthier producers. They probably may be best suited to manage the WS, due to the large sums they have invested, but the fact remains that in this case STABEX is far from promoting poor producers and consequently contributing to poverty alleviation.

Nevertheless, despite 4 other existing WS in the surroundings, the members declared their interest in the new WS for the following reasons, amongst which some have already been highlighted in other WS: members would be more attached to their own station; reducing works related to processing and drying would save time for other activities; the existence of the WS obliges the coop to restructure itself in a more efficient way and its members will gain in management and processing capacities; jobs would be gradually created as the production increases; the areas planted with coffee trees should also increase, thus leading to better incomes; the access to credit would be facilitated and, last but not least, the closer cooperation between all the members would contribute to the reconciliation process.

The impact of a WS on quite poor people is not only questionable at Rulindo. At Buffcoffee, at least 95% of the permanent and seasonal workers are members of the coop., already benefitting from incomes of their own plantations, even if sometimes

modest. In any case, the choice of workers seems not to be based on the criterion of poverty.

The same at the new WS Mununu: asking about a possible involvement of poor people in the staff, the vice-chairman answered all jobs would be primarily reserved for members of the coop and their families. In all other WS visited, the answer has been the same, which is actually understandable when considering that coops are primarily dedicated to their own members. There are, of course, differences between members, some being wealthier than others, but since all are owners of their land and harvesters, it would be more accurate to say that the WS enriches its coop members, which actually is its primary role, rather than fighting against poverty except, maybe (but not confirmed) at the construction stages of the station.

The impact on poorest not being ascertained, it is doubtful that the general objective aiming at alleviating poverty in the coffee sector has been reached through washing stations. Nevertheless, the STABEX has not been limited to creating new stations and supporting others. It has simultaneously provided, through OCIR CAFÉ, manure and fertilizers as well as new coffee trees. This most probably has had an impact on the revenues of all the producers, including the poorest amongst them. Unfortunately, the absence of appropriate data on who has received what does not allow estimating the real impact on those producers.

For private individuals who invest in WS, sometimes profits are reinvested in the expansion / improvement of the station or in the creation of a new station, like in the example of Buffcoffee, where the owner has now invested in a second WS 7 km distant from the first one.

In terms of impact, it should also be underlined that a WS supposes electricity (usually a generator), as well as access to water, both factors of development.

A WS, however, is not a solution in itself for improving wages and fully washed coffee production. The capacity of the coops to properly manage their WS is at least as important. A good example can be given by the new washing station Kibingo and the related cooperative COPROCAGI, in Butare.

Due to mismanagement and bribery committed by some members of the board of COPROCAGI, after the viability of the coop has been assessed positively by OCIR Coffee in 2005, about 340 members left the organisation, which actually only registers 62 members in 2010 in comparison to about 400 in 2004. The coop has a debt amounting to 5.5 MRWF (4 million for fertilizers, which haven't been paid to OCIR and 1.5 million representing the wages of the workers hired for the construction of the WS). The board was changed 5 times since the beginning; hence today the coop does not have the capacity to run the WS, and OCIR CAFÉ has been obliged to place a temporary manager and a cooperative specialist to run the WS and assist the coop. So far they processed only 6 MT of coffee cherry as compared to the overall capacity of 100 MT.

This kind of mismanagement is not only to be found within WS belonging to coops. A relevant example could be provided by the WS Kibuye Mountain Coffee. This WS, owned by a private person, was not operational in 2009 because it did not reimburse the credit provided by the Rwandan Development Bank (RDB). STABEX did not subsidise anything in the WS, that was created in 2005, but the owner, who has invested a lot in plantation, has benefited from 120 000 plants from the 300 000 plants produced by STABEX within the area. The other 180 000 remaining plants seem to have been used to replace old

coffee trees, but not for new extensions. He also received from RADA graft and non graft plants of macadamia that are in intercropping with coffee trees. However this statement could not be verified, the mission team has been told that the 300 000 plants would represent more than half of all productive coffee trees in the area (500 000), in which two other similar WS are currently operating.

The targeting of the owner of the WS as the most important individual beneficiary is questionable, because it appears to concentrate a significant part of STABEX inputs on a private person who does not necessarily have the capacity to properly manage the cropping and/or post-harvest activity. In this specific case the owner looks very weak on both sides. It doesn't mean that supporting private entrepreneurs should be discarded, as in some cases the mission could verify the appropriateness of such an approach (at Buffcoffe, for example), but in this particular case, the plantation was very badly maintained, in spite of being implemented since 2005 – 2006.

The mission team has also noticed that different new WS, like Rulindo, Mununu or Kibingo, have been finalised too late (March-April 2010) for being fully operational during the peak season 2010. This demonstrates an unsatisfactory follow-up of the construction phase, which certainly could have been achieved two months earlier, especially after 18 months delay. This negative impact could have been easily avoided.

Some weaknesses in the follow-up and quality control of WS construction can also lead to negative effects for the beneficiaries. This is clearly illustrated through the example of the WS of Nyamure (Cooperative Dutezimbere Kawa):

The construction was not achieved properly and many deficiencies are visible on the storage building and inside the WS, and the cooperative does not have the capacity to identify these problems:

- The storage is badly constructed, with unfixed gutters, ground with deteriorated concrete due to deficient mixture, deficient truss, and unsatisfactory chaining
- The fundament was larger than the 200 m² storage because the cooperative wanted to build an office, but the entrepreneur executed the work within the initial financial plan, hence he had to reduce the quality of the storage.

The WS shows a very weak concept with the pre-drying area placed close to the reception area, the generator is not protected from rain, electricity wires are not protected, many tanks show failures, and wooden canals are not clean.

The consequence, now the final acceptance of the works has been done, is that it will be up to the coop members to pay by themselves for all repairs and any redevelopment. Improper monitoring and follow-up actually has a cost as is not just an evaluator's fad.

Regarding bench terraces, many positive effects have already been registered in previous evaluations⁵⁰, notably due to the following reasons:

⁵⁰ Notably in "Evaluation et analyse ECOFIN conjointes des programmes UBUDEHE et Appuis aux Districts du DPRPR", par Gilbert Germain et Célestin Mboukem, p. 104-105 and in « "Technical assessment and socio-economic impact of the development projects of the districts financed by the CDF - Provisional report - 11.2007 – Southern Province, p.p. 26-27.

- Strong job multiplier effect and good impact on wages, especially through HIMO works;
- Projects conducive to better social cohesion through common works;
- Significant yields (often multiplied by 3 to 5 depending on the crops produced) have been observed due to the development and the gradual introduction of improved seeds and a rotation of crops to preserve soils;
- Augmentation of fodder, cultivated on the edges of plots of the terraces;
- Increase in production has an effect on the development of other sectors, like transport, processing plants, the creation of small shops, cooperatives of producers, etc.;
- Rise of the value of land transformed in bench terraces (prices usually multiplied by 2 in a short time period).

On the other hand, bench terraces also require high investments, and farmers with a keen interest in increasing productivity should be guided and trained for optimizing the investments made. Building capacity to replicate successful experiences is considered as key for successful development.

Tea - The tea sector is much better structured and organized than the coffee sector. In general, one can find a factory associated with an industrial unit and owners and growers organised within a cooperative. With the privatisation, shares in the factories have been given to the cooperatives, thus increasing their capacity to influence decision processes. This logic counterweight allows them to negotiate better prices, production, drainage, etc., in a dialogue with the private factories. The balance of power between producers and other stakeholders of the sector is a factor for increased resources.

As already noticed with the coffee stations, tea coops have rapidly understood that the privatisation process would simultaneously require the reinforcement of their management capacities and the necessity to improve their negotiation capabilities. This, for example, has been clearly stated by the members of the coop KOBACYAMU: "Due to the privatisation, we have elected our management staff at a higher level. Those changes have been introduced immediately after the privatisation of the Kitabi tea plant, because we have considered the existing staff not enough adapted to this new context. A private firm is working for its interest, which means that in turn we also have to become smarter in defending our own interests, even if for the moment working with the company is going pretty well."

With 4.996 members, the coop KOBACYAMU created in 1993 covers 16 tea sectors on about 800 ha, in comparison to the 397 ha of the estate, and is to be considered as a key player for the tea estate. This may partially explain why, since the privatisation, the Kitabi estate has initiated a social policy, introducing a group insurance scheme for the workers, contributing to the construction of class rooms and intending to rehabilitate a primary school in the near future. At the end of June, the best producers will be rewarded by the company, by the gift of a cow or another major present. Currently, 23 permanent workers are under contract, as well as about 2.000 temporary workers during the busiest months, thus creating important job opportunities for the surrounding villages. Employment has actually increased with the production and the extension of the estate.

The four top members of the coop met by the mission team also declared that the road rehabilitated by the STABEX has a great impact, reducing the access time to the estate by

two and ensuring timely and quality delivery of the green leaves to the plant, hence reducing losses. Besides, the road also has a socioeconomic impact through facilitated access to the health centre and the purchase and delivery of products.

Members of the cooperative ASSOPTHE (4.500 members, including about 30 to 35% women) at SORWATHE tea estate have underlined that the drainage works financed by STABEX have involved a large amount of manpower. In 2008, for example, 630 workers, distributed in 21 teams of 30 workers earning between 800 RWF and 900 RWF/day have been participating in the construction and rehabilitation of drainage canals. The total wages amounted to 6.161.200 RWF. In 2009, the amount of wages reached 15 MRWF, thus participating to the overall enrichment of the concerned population, constituted by both members and non-members of the coop. According to the manager of the coop, STABEX would pay more than the coop for the drainage, thus attracting many daily workers, sometimes even from other districts. At least 600 of such workers came in 2008 to the coop for looking for a job. Even if all of them couldn't be hired, the mission team estimates that the STABEX has had a significant impact on the poor through this specific project.

Thanks to the drainage, not only floods have been avoided, but the overall quality of the tea production has improved and some areas could be replanted on about 50 ha. 1 million trees, not yet in production, have also been replanted in 2009. 4.000 to 5.000 people are working on the tea plantations. They are distributed in about 20 associations, including 13 for the picking of the green leaves. Amongst those workers, about 40 to 50% are non-members of the coop, thus being the most important employer in the area. The contribution of the STABEX is highly estimated by the beneficiaries.

The coop has 62 permanent workers and a turnover of some 900 MRWF (i.e. an average of 173.000 RWF yearly revenue per member in 2009), including 780 MRWF earned from the green leaves sold to the SORWATHE and 120 MRWF from the coop's own gas stations, its 10 ha forests (the coop is selling wood to the SORWATHE) and its own tea plantation (29 ha), which has a sufficient production for paying the permanent staff. The coop also has two lorries and a van, which sometimes are rented for people outside the coop, as well as its own nursery. The coop is also managing a savings and credit cooperative ("COOPEC") with currently 58 MRWF. This helps supporting members looking for credits.

In addition, being certified by FAIR TRADE, the coop each year receives money from this organisation, depending on the level of production, for investing in micro-financed projects for the poorest members of the coop or for free of charge schools ("écoles gardiennes"), water conveyances projects, etc.

If the coop wouldn't have got 13% shares in the SORWATHE, the members would have been ready to create their own plant, the coop manager said. The 2 billion RWF for this new plant would have had a return on investment of only 7 to 8 years, he added. The fact indeed illustrates the power of the coop vis-à-vis the SORWATHE, especially when taking into account that the 397 ha of this tea production unit would probably not have been able to compensate the loss of the 953 ha currently belonging to the coop. It is also interesting to mention that the coop has its own quality analyst closely working with the SORWATHE, in order to ensure that the quality of the green leaves is well estimated.

In conclusion, with 4.500 members, close to 1.000 ha tea plantations, a turnover of 900 MRWF, a diversified portfolio of profitable activities ranging from tea production to gas

stations and a significant social involvement, ASSOPTHÉ appears as an example of the strong structuring of the cooperatives in the tea sector.

Another significant impact of STABEX in the tea sector is the use that has been done of HIMO works in some tea areas. As a matter of fact, after some delays registered with private companies for the construction of four bridges in Mulindi to facilitate the river flows beyond the dam, OCIR THE decided to execute the contracts through HIMO, so as to ensure a timeliness implementation at acceptable cost and with the participation of the local communities. Therefore, the OCIR was the executing agency in charge of planning, execution and follow up. The first building site was Mulindi, as pilot sub project, and later the execution was extended to other sites since June 2008. Apart some difficulties in recruiting manpower and finding the raw material, this approach appeared to be both relevant and efficient. The mission team, however, has not been able to find accurate data on how many workers exactly were impacted by this HIMO approach.

During a visit to the tea cooperative COOPTHEGA in Nyabihu, the mission team could confirm a significant impact of STABEX in terms of manpower. As an example, the manpower used for the drainage works in Cyamabuye between October 2007 and August 2008 could be calculated as follows: 467 workers have been working 10.151 days for a total income of 9.078.180 RWF, thus increasing the purchasing power of the concerned population. It has, however, not been possible to verify if the same workers have benefited from more than one working contract.

Regarding the construction of 5 barns (collecting centres) in October 2007, 957 masons and 976 masons assistants have been employed at 1.500 RWF/day for the former and 750 RWF for the latter, thus representing a total income of 1.417.500 RWF.

In so far, the mission team may conclude that a clear impact of the STABEX on employment has been registered in the area, even if temporarily.

Despite STABEX has not been as efficient in the pyrethrum sector, notably due to local difficulties and strategies, which lastly did not appear to be the most relevant for its development, the mission team has tried to better understanding the needs of the traditional producers of the region of Ruhengeri and their interest in being now organised in coops. The visit to the cooperative KOTUI in Kinigi (120 members, 142 ha pyrethrum and a production of 28 t in 2010) proved interesting in this regard.

The major problems faced by the coop members are the lack of seeds, the existence of old plantations and the lack of dryers. In addition, problems related to erosion due to significant rainfall in the area, the lack of manure and phytosanitary products are hindering the increase of the production. Most of the producers do not currently use 40% of their plots for producing pyrethrum, as they are contractually obliged to. This could actually be noticed from the responses of the 16 attendees to the meeting, showing that their average production is only about 117 kg dried flowers, thus meaning however an average annual income of 117.000 RWF per producer.

Their interest in being part of a cooperative is threefold, they said:

- When selling individually the dried flowers, each of them gets 1.000 RWF/kg, whilst the coop receives 1.050 RWF/kg. This difference of 50 RWF represents an additional income of 1.400.000 RWF for the coop (28 t produced x 50 RWF).

- With this amount, added to the 7.000 RWF paid by each member as its social part in the coop (7.000 x 120 = 840.000 RWF), the coop can provide some small credits to members in difficulty. Such credits are guaranteed through the pyrethrum production of the borrowers.
- In addition, they appreciate having regular meetings together for exchange of information and ideas. The coop has also the objective to professionalise its members

The earned money from pyrethrum is used for health insurance, schools expenses and for improving living conditions. The elderly, who have no more the possibility to work on their plots, are able to pay seasonal for helping them, thanks to their earnings. The most important producers (one amongst the 16 has produced 500 kg in 2009) are able to buy a cow or to renovate their house. Each member also has an account within the local savings and credit cooperative.

According to official figures, 20 572 HIMO workers would have been hired for bench terracing under this STABEX component. This number looks quite significant as regards the impact of STABEX on employment of manpower. It is also likely that this has had a direct impact on many poor people, which are usually hired for this kind of job.

Gender - STABEX was not intended to specifically take into account the gender aspect. By supporting the producers of coffee and tea it supports both women and men indistinctly.

Rwanda is regarded as one country of Africa to the forefront in terms of respect for gender equity. This is reflected in the institutions and, to some extent, in the implementation of STABEX even if the programme planning does not reflect this. For example, one finds both men and women for jobs in the factories of tea and coffee. Women can form part of the management structure of cooperatives and are playing an important role in the washing stations, notably for sorting coffee, as well as in tea plantations (tea harvest).

It should also be underlined that women were largely involved in drainage works in the tea sector, whilst men were predominant for the construction of the barns. Concerning the drainage, a majority of workers were coming from the surroundings and even from outside the concerned districts, as has already been noticed for other STABEX projects, thus showing the attraction of STABEX financing on the population.

In the case of bench terracing, a total of 8 747 men and 11 825 women would have been hired for implementing the works. It looks somehow strange to register much more women than men for such difficult works, but this can be due to shortages in finding manpower in the areas concerned.

In this view, a more sensitive approach to the concept of gender is likely to lead to greater impact of the project.

5.4. Impact on capacity building

Some mentioned examples clearly show that the highest risks WS are facing at the present stage are management weaknesses. How, indeed, imagine that producers who, for the most part, have rarely had more than a few tens of thousands of RWF in their pocket, would be able overnight to handle a WS with revenues and expenditures raising tens of millions of RWF per year? The reinforcement of management training sessions

well adapted to the beneficiaries' level of understanding should therefore be considered of utmost importance.

At the current stage, the impact of the training sessions organised so far has been mitigated: management training is mostly criticised, whilst technical training is more appreciated.

At the new WS Rulindo, two organisations (INADES and SNV) are currently helping the cooperative to establish its account preview and planning for the first year of production of the WS. This has never been done before, thus meaning that the WS was designed and established without having any idea on the issue. However, the members also underlined the inappropriateness of the management training they have received, which they consider too theoretical and not really in line with their capacities. They would prefer training in the form of accompanying measures, more focused on their specific needs and understanding abilities. The same comment was actually made at different times to the mission team.

The cooperative members of WS NYAMUENDA (District of Rubavu) received technical training, which apparently have been helping them to improving the management of diseases and insect attacks (coffee rust, antesia, etc.). In general, impact of technical training looks better, probably because much more practical for largely illiterate producers.

Due to the current weakness of many cooperatives in the coffee sector, emphasis should be put on management mentoring for those owning a washing station and facing management difficulties. This could be done through concrete assistance by qualified mentors to managers of cooperatives for a limited period of time (to be defined on a case by case basis, according to precise needs). The mentor would return after a few months to the coop for checking the quality of management and possibly adjust some aspects that would not have been properly integrated.

However late, it seems there was an awareness on this issue, as the technical committee of STABEX/OCIR Café has decided during its meeting of March 16, 2010 to support the financial management of the coops through "7 recruitments of qualified managers (level Ao), who will help them clean up their management". The recruitment test being done and given the time remaining, it was recommended to directly contract with the first 7 candidates.

Simultaneously, the PDCRE came to the same conclusion⁵¹: "Most of the washing stations are facing management difficulties, partly due to the confusion of roles between governance of the cooperatives and the management of their coffee washing stations (CWS). The mission sees it as desirable for the management of the CWS to be given more autonomy in management decisions. (...)In addition to these support arrangements, the (...) remaining cooperatives in distress will require special coaching. It was agreed with the mission that full-time management advisors be placed with these institutions for about 3 months..."

⁵¹ « Smallholder Cash and Export Crops Development Project" (PDCRE) - IFAD Loan 596-RW - 9th Mission: Implementation Support - AIDE MÉMOIRE – May 10, 2010 – Final, p. 3

During STABEX many training⁵² have also been delivered to OCIR THÉ staff, cooperatives and tea makers, but in the absence of any follow-up on the issue it is currently impossible to measure the long-term impact of those training sessions, which appear to have been quite expensive with sojourns in Kenya, South Africa and Sri Lanka

If 79 people have been trained under the pyrethrum component⁵³ as stated by the final TA report of 2009, the amount of 131.000 EUR that would have been used⁵⁴ for this activity is not understandable, as it would represent 1.658 EUR/trainee in a country where the average income/year is estimated about 400 USD. However according to the TA report RWF 5 595 000 have been spent (equivalent to € 7 460) which seems more adequate.

In all the cases mentioned, post-assessments of the lessons learned and practices effectively implemented through this learning process would have been highly recommendable.

5.5. Environmental Impact

By setting up recycling and pollution control at the WS, and devices for supplying reforestation wood boiler plant tea, STABEX has contributed to environmental protection. The establishment of a recycling and pollution control at the WS level is minimizing the damage that may be caused to the environment by processing the coffee.

As regards tea, the environmental measures taken by the project seem appropriate. The obligation of the tea growers to plant 0.25 hectares eucalyptus for every hectare of planted tea appears to be a beneficial measure for the protection of the environment. In addition, the drainage has largely decreased the negative impact of floods and contributed to the re-plantation of new areas.

The environmental impact of the new bench terraces can also be estimated through the positive experience already registered with other constructions of this type. They usually have a significant impact on the preservation of environment and arable soils, which remains a critical issue in Rwanda.

5.6. Summary Grid analysis

The following grid provided a summary of the impact for the different STABEX components, and result from the analysis made by the two experts. Given the same weight for all criteria and all components, including pyrethrum that has been particularly weak, the impact appears to be medium. However it has been generally good, especially for the Support to EDPRS and SPAT2, the decentralisation process, the

⁵² Training of 22 trainers in Kenya in September 2004; training session for agronomists, in Shagasha, December 2004; training for tea plant staff, cooperatives and farmers in Pfunda, April 2005; training session for 31 members of tea cooperatives in Kenya, in October 2006; training on cultural practices for OCIR THE staff and cooperatives in Shagasha in August 2007 and Pfunda in September 2007; training session for Tea Makers in India and Sri Lanka, in 2007; training for 4 OCIR staff on public markets in South Africa and for 5 OCIR staff on cultural techniques and road rehabilitation, in November 2008.

⁵³ 14 agronomists in the extension areas and 3 agronomists of the project trained in January 2009 on cultivation methods and disease control, as well as 62 people in October 2009 on post harvest drying activities and seed management, including agronomists from all areas and co-operative managers.

⁵⁴ According to the RHODA financial progress report

appropriateness of utilised techniques and the impact to reconciliation, all significant issues, which do not appear in this grid provided by the Terms of Reference of the evaluation mission.

Table 32. Impact of STABEX components

Impacts	Coffee	Tea	Pyrethrum	Terraces	Diversification Project	Decentralization	Total
Livelihood improvement	3	2	0	4	2	3	2.3
Community organization improvement	3	3	0	3	3	3	2.5
Final users' capacity improvement	2	2	1	2	3	3	2.2
Technicians' capacity at district level	2	2	0	3	3	2	2.0
Technicians' capacity at central level	2	3	0	0	2	1	1.3
Banks' capacity improvement	2	1	0	3	0	2	1.3
Support to Local Governments	0	0	0	2	2	3	1.2
Support to EDPRS	3	3	1	3	3	3	2.7
Support to SPAT2	3	3	1	4	3	4	3.0
Decentralization	2	4	1	3	3	4	2.8
New dynamics generated	3	2	0	3	3	3	2.3
Appropriateness of utilized techniques	3	3	0	3	3	3	2.5
Impact to Reconciliation	3	2	0	4	3	4	2.7
Total	2.4	2.3	0.3	2.8	2.5	2.9	2.2

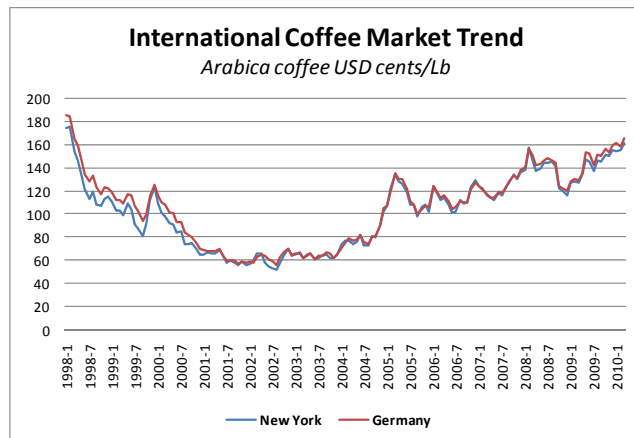
Level of impact - 4 Excellent, 3 Good, 2 Medium, 1 Deficient, 0 Absent

6. Sustainability

6.1. Sustainability of value chains

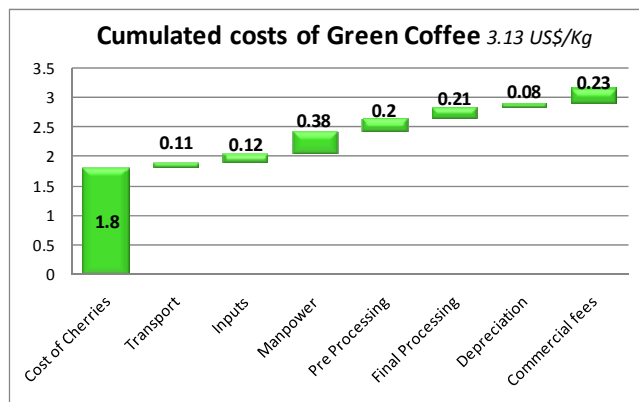
6.1.1. Sustainability of Coffee

The coffee market trend is becoming attractive. The negotiations with the IOC/ London (International Organization of Coffee) are sometimes made indirectly through the IAOC (Inter African Organization of Coffee) which is based in Abidjan; but recently Rwanda Coffee seems to have a more favourable reputation on the international markets, including Europe, United States and Japan. With the good results in terms of quality, and especially larger quantity of fully washed, FOB prices have been doubled. The general trend on these markets is converted into new potential for the coffee from Rwanda, and shows (as illustrated in the following graph) that prices have recovered the level of 1998 at about USD 175 per Pound, which means about USD 4 000 per MT.



Production costs have also recently⁵⁵ been evaluated by OCIR CAFÉ, with a unit production cost for 1 Kg of cherry coffee which is estimated at RWF 80, equivalent to RWF 400 for one kilo of parchment coffee.

When the minimum price is set to RWF 130, the producer margin is RWF 50. A study undertaken by OCIR CAFÉ has demonstrated that the cumulated costs, production and processing, raised by USD 3.12 per kilo in 2009. The following graph illustrates the different costs at all steps of the value chain. In the present circumstances coffee from Rwanda is becoming profitable at all levels.



Regarding the new WS the evaluation made on Rulindo WS on a very conservative basis, shows an Internal Rate of Return of 19% and a full pay back after 5 years, which is quite good for this type of investment.

⁵⁵ Based on 2009 OCIR evaluation

Table 33. Rulindo Washing Station calculation of IRR

	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Parchment MT	0	40	80	100	100	100	100	100	100	100	100
Investments	-72										
Fixed costs		-14	-14	-14	-14	-14	-14	-14	-14	-14	-14
Variable costs		-54	-108	-135	-135	-135	-135	-135	-135	-135	-135
Inflows sales		68	137	171	171	171	171	171	171	171	171
Cash flow	-72.0	0.2	14.5	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
Net Present Value											38
IRR											19%
Pay back	-72.0	-71.8	-57.3	-35.6	-14.0	7.6	29.3	50.9	72.5	94.2	115.8

Computation made on the basis of realistic processing quantities of parchment, given the present performance of the WS: actual number of coop members, and drying capacity, to gradually meet 100 MT.

Regarding the existing WS the following example of Buffcoffee WS, shows a good profitability of 38%.

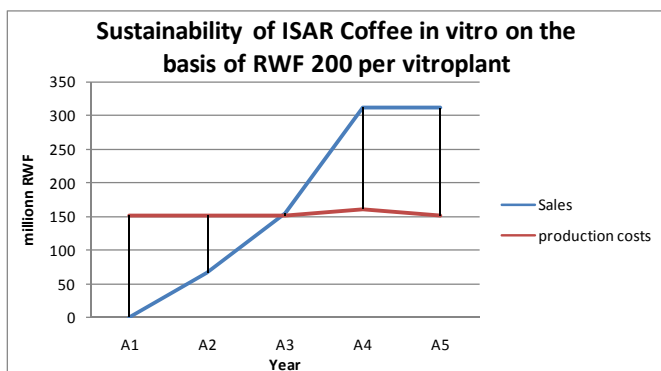
Table 34. Buff Coffee Washing Station calculation of profitability

Sales	130 685 200
Costs and amortization	94 369 750
Net profit RWF	36 315 450
Profitability %	28%

Computation made effective 82.25 MT processed parchment and sales in 2009.

6.1.2. Sustainability of ISAR

ISAR has established a selling price at RWF 500, which is very high and in any cases not viable for the distribution. The computation included fixed, variable costs and a very high margin for ISAR but the calculation is not correct and has to be revised. The following graph shows that with RWF 200 per vitroplant it remains viable and can even be reduced, because ISAR may breakeven within 4 or even 5 years.



The evaluation team recommends refining this scenario and propose an alternative which could be affordable for farmers which will have to provide a contribution for purchasing of vitroplants.

6.1.3. Sustainability of Tea

Regarding the sustainability of tea plants, it is difficult to estimate their viability, since financial data were not made available to the evaluation team. However, given the high

market potential, it is likely that estates are profitable, which is confirmed by most if managers.

Rehabilitated roads and drains also appear to be sustainable, because many cooperatives started to establish a fund for works' maintenance that is deducted from final payment to their members. For example in Mulindi Estate the coop deducts RWF 2.7 per kilo of green leaves, from the RWF 96 paid by the plant, for road maintenance.

6.1.4. Sustainability of Pyrethrum

With regards to the little achievements of this component by RHODA, the value chain is not yet sustainable. In spite of the new investments undertaken by SOPYRWA to produce pale extract instead of crude and sell higher value product on international markets, the plant is underutilised (not more than 10%). Many efforts must be achieved towards improvement of the production and drying process at farm level, so as to ensure the viability of the value chain.

6.2. Sustainability on intensification and erosion

Fight against erosion can essentially be noticed in the tea and bench terraces components. For the tea, it has already been stated that many cooperatives have already a specific fund dedicated to the maintenance of roads and drains, but it should be added that the EU Delegation in Kigali also acts on watersheds to limit the effects of erosion having a direct impacts on the land below.

Concerning terraces, it is in the direct interest of the owners to maintain them in a good shape. The additional incomes due to higher yields should help them ensuring all possible maintenance costs without major difficulties.

6.3. Constraints to Sustainability of value chains

6.3.1. Constraints for Coffee

There are still many constraints for the development of WS in Rwanda. In the WS, coffee processing is made by wet method. Producers use to process semi-washed coffee, also called ordinary coffee, which is of poor quality owing to the fact that fermentation is only partial, whereas in the WS fermentation of the "fully washed" is complete and produces a coffee of better quality.

- Among the 185 WS, 45 are of small size, with a potential of 16 550 Tons of parchment, whilst they process only 4 800 Tons, which confirms the weak capacity of WS owners to manage their plant. There is a critical problem of distribution of WS, because a) each unit is quite oversized and sometimes badly located, b) the overall processing capacity is still insufficient for Rwanda which has a potential of at least 30 000 MT of parchment. As result the new tendency is to develop smaller size WS, which are closer to the producers. The geographical distribution is not good, because in some areas the capacity of the WS is over-estimated as compared to the potential of production.
- There is an unquestionable problem of management capacity level of the WS. Credit repayment defaults, from WS to the bank, result in cash shortages for the next campaigns, especially during the harvest peak periods. In some areas the lack of

infrastructures, road access, electricity, or water supply, do not facilitate the good performance of the WS.

- Some farmers remain tied up to the traditional semi washed coffee system, because they still consider it is easier. Furthermore it seems that some local authorities would be involved in marketing ordinary coffee, and thus do not support the installation of new WS.

Regarding the replacement of old coffee plants, OCIR CAFÉ has not yet established a strategy to disseminate vitroplants produced by ISAR that should not be free of charge. Moreover there are methodology weaknesses and a lack of control to ensure an adequate dissemination of traditional plants from the different nurseries. Therefore, the replacement is still low and farmers are not yet prepared to be at least partially charged for these plants.

6.3.2. Constraints for Tea

The two major constraints for the Tea component are a) the privatization process, which depends on intrinsic character of the estate (The privatization of Mulindi and Shagasha is more difficult because of the absence of industrial plot), b) the lack maintenance of the core canals in Uganda that have negative effects on drainage in Mulindi Estate.

6.3.3. Constraints for Pyrethrum

In 2008 SOPYRWA processed about 400 MT of dry flowers, of which 250 MT from Musanze/ Nyabihu, and 150 MT from Burera/Rubavu. It seems that they received a very small quantity from the extension areas (not more than 0.5 MT). The total capacity could be multiplied by four, since the plant works only 3 months per year. If farmers were properly utilizing the 40% of government land, the production in the present conditions, would meet 1190 MT, which means three times the present level. The major constraints are:

- The raw material is still lacking. In the beginning the multiplication was made by duplication of parent stock, but it was limited. Therefore SOPYRWA and RHODA decided to establish nurseries to produce seeds⁵⁶. This is probably the most relevant activity undertaken by STABEX.
- Drying equipments were quasi absent when STABEX started its activity. Farmers dry the flowers on the floor with high risk of quality loss. The USAID programme PYRAMID has recently experimented dryers (1mX6m) with three levels and transparent roofs; the cost of one dryer is about US\$ 250 (RWF 185 000). With dryers farmers can reduce the drying time from one week to 2 or 3 days.
- Yields are still low with only 230 kilograms of fresh flowers per hectare, when there is a potential for 800 kilograms⁵⁷. Low yields can be improved by regeneration of vegetative material; a MOU has recently been signed between SOPYRWA and ISAR to

⁵⁶ The multiplication by seed process gives a ratio of about 1 hectare of parent plants for a potential 40 hectares of farm plantations. With a yield of 300 kg it is possible to produce 60 kg of seeds for 4 ha of nurseries, and finally raw material for 40 ha at farm level.

⁵⁷ 800 kilograms of fresh flowers correspond to 160 kilograms of dry flowers

provide in vitro regenerated material. The second effect of regeneration will be the higher PY⁵⁸ content, which can range up to 2.5 instead of the present 1.3.

- The soil fertility is also a constraint, because it has been found that soils were very poor in phosphorus. SOPYRWA is also experimenting the effect of organic fertilization and will analyze the results in 2010.

6.4. Ownership of the components

The ownership looks variable from one component to another.

Concerning the Coffee sector, it remains unsure whether the provision of free of charge items, like coffee trees or fertilizers is really the best approach for seriously involving the beneficiaries. On the other hand, the mission team has met several WS benefitting from an evident involvement of their owners.

Regarding the tea sector, it appears that too often the targeted beneficiaries have not been enough interested in being implicated in the rehabilitation of tracks, whilst they have much better been involved in the construction/rehabilitation/maintenance of drains, for example.

As regards Pyrethrum, after an evident interest of potential producers in remote areas, the motivation seems to have fallen, due to the disappointing results of this STABEX component.

With yield increases, fodder produced on the edge of terraced plots, the rise of land value and increased incomes, the owner of bench terraces are generally showing a very strong ownership, because directly related to their own interests.

A significant degree of ownership could also be found in the different decentralisation projects, notably UBUDEHE, as has been already noticed in the final evaluation of this programme.

Concerning diversification projects, ownership appears variable from one project to another. In the best mentioned initiatives, it is obvious that the owner and related teams are very much dedicated to the success of their projects, whilst in others the mission team has noticed important lack of involvement and ownership from the management team.

7. Visibility

Concerning the washing stations and most of the rural roads, the visibility is generally appropriate. It occurs most often in the form of panels placed in the vicinity of the WS and through adhesive on some equipments provided by STABEX.

On other STABEX achievements, however, like plantations of coffee trees and tea plants, drains, tracks, bridges, etc. the mission team noted a real lack of visibility. Rarely panels are installed in the vicinity of the plantations or realisations financed through STABEX and an effort should certainly have been done in this direction.

Some publicity, TV and radio, spots porters, calendars and T-shirts have also been realized.

⁵⁸ Concentration level in Pyrethrum

8. Conclusions

COM STABEX has generally performed well with significant impacts on livelihood improvement, on macro economic changes, and reconciliation.

STABEX has contributed stimulating market-oriented agriculture and local initiatives and accompanying the privatization process to ensure added-value exports.

The physical achievements of STABEX for coffee, tea, diversification, and decentralization are substantial, but the documentation does not reflect these achievements.

With more strategic approaches and appropriate monitoring, STABEX would have gained higher degree of effectiveness.

Change between situation 1999 and 2009 is very significant, with creation of 185 WS, 174 coffee cooperatives, 24% of fully washed coffee, the tea privatization close to be achieved, 1700 hectares of new bench terraces, introduction of new diversified technologies, and reinforcement of decentralization process. STABEX has largely taken its part in this important evolution of the coffee and tea sectors, even if not alone.

Nevertheless weaknesses are visible due to: unclear selection process of WS, lack of vision for dissemination of vitroplants, poor design of pyrethrum, lack of monitoring and reporting, absence of impact assessment, failures in some diversification projects, and insufficient management capacity building.

STABEX will likely have significant long term effects through increased productivity on bench terraces, and introduction of new technologies for the coffee and diversification component. But it is not yet measurable at the time of the evaluation.

9. Recommendations

The present capacity of WS is about 50% of exports. New WS should be established according to clear criteria: appropriate size and geographical location and cohesion of existing cooperatives.

OCIR CAFÉ should lead the marketing strategy of vitroplants, and establish a 5 years protocol with ISAR including a sound planning. ISAR must elaborate a viable business plan.

The mission does not recommend pursuing external support to the pyrethrum sector, as long as RHODA and SOPYRWA have not entered into a common strategic planning starting with the traditional areas.

Since EU has entered in budget support, monitoring and impact assessment systems should be prerequisites for the benefit of all parties.

For diversification projects it is recommended to disburse in accordance with the action plan of each project, to systematically control the effective use of funds including the contribution, and to prepare the recipient to phasing out.

OCIR CAFÉ and OCIR THÉ should establish links with the related federations and unions of producers to prepare a management training plan dedicated to the coops.

As STABEX will close in December 2010, the MINAGRI should appoint a specific mission for drawing lessons learnt from the three value chains, coffee, tea and pyrethrum.

Annexes

ANNEX 1. Terms of Reference

Evaluation du programme STABEX au Rwanda (2002-2010) Conventions de financement n ° COM STABEX 96-99

1. INFORMATIONS GENERALES

➤ Introduction

Le COM STABEX et son évolution

Le COM (Cadre d'Obligations Mutuelles 1996-1999) d'un montant de 20.140.000 € a été signé le 5 novembre 2001 Il portait sur l'utilisation des reliquats STABEX acquis au titre des exercices 1990, 1991, 1992 et 1995 et des transferts acquis au titre des exercices 1996 à 1999. Ces reliquats et transferts correspondent à des compensations de pertes sur les revenus d'exportation de quatre produits (café, thé, pyrèthre, cuirs et peaux) respectivement pour 68%, 26 %, 5% et 1%.

Un avenant à ce COM a été signé le 1^{er} août 2006; il a porté son montant à 22.996.882,50 €, réorienté ses objectifs en prenant en compte les évolutions intervenues depuis 2001 dans le secteur agricole et dans la politique économique du Gouvernement du Rwanda, et, enfin, prolongé sa phase de mise en œuvre opérationnelle jusqu'au 31 décembre 2010 (la date limite pour la signature des derniers engagements étant le 31 décembre 2008 et leur clôture devant être réalisée au plus tard le 31 décembre 2012).

En septembre 2008, un MoU signé entre l'ON et la DCE a affecté au COM 96-99 les intérêts bancaires générés en 2006 et 2007, ce qui a porté son montant à 23.833.933 Euros.

La répartition budgétaire par composante du COM est la suivante :

	Ressources COM	Montant Initial	Montant Avt 1 (€)	réallocation (€)	% des SP/ Total
1	Ss-programme Café	10 100 000	10 100 000	10 226 649	43 %
2	Ss-programme Appui privatisation	4 320 000	3 732 714	3 857 636	16 %
	<i>(dont Appui privatisation filière thé)</i>	<i>(3 000 000)</i>	<i>(3 032 714)</i>	<i>3 100 000</i>	<i>(13 %)</i>
3	Ss-programme Diversification	2 000 000	3 500 000	5 239 946	22 %
4	Ss-programme Appui Décentralisation	2 000 000	2 000 825	1 665 277	7 %
5	Assistance Technique STABEX	1 540 000	2 300 000	2 535 514	11 %
6	Evaluations et audits STABEX	180 000	180 000	262 558	1 %
7	Imprévus / Contingences	0	1 183 343,50	46 353	
	TOTAL	20 140 000	22 996 882,50	23 833 933	100%

Par une décision de la CE intervenue en 2007, la fin de la phase de mise en œuvre opérationnelle de l'ensemble des fonds STABEX a été fixée au 31 décembre 2010; la clôture des programmes devant être réalisée pour le 31 décembre 2012.

Le COM STABEX a véritablement démarré en 2003, soit environ deux ans après sa signature, avec l'arrivée de l'assistance technique BDPA et la signature des premiers DP.

Au cours des trois premières années de la mise en œuvre du COM STABEX, les activités ont principalement concerné deux composantes opérationnelles (Café et Privatisation) tandis que les autres ne connaissaient que des actions ponctuelles.

C'est à la mi-parcours du projet, avec la production du rapport de l'AT pour la période 2003-2006 et les propositions d'utilisation des reliquats, que des réflexions ont été menées entre l'ON, le MINAGRI et la DCE pour aboutir à une affectation définitive de l'enveloppe. C'est ainsi que les programmes terrasses radicales et projets de diversification ont vu le jour. C'est à cette même période que le profil de l'AT a été modifié pour s'adapter à toutes les composantes du COM. A ce jour, la période opérationnelle du projet atteint 6,5 ans.

Le cadre opérationnel du COM est structuré comme suit :

Sous programme CAFE

Ce sous-programme comporte deux rubriques :

- la relance de la filière café par un appui à l'OCIR Café ;
- la mise en place (infrastructure, équipement et fonctionnement) d'un laboratoire de café in vitro à l'ISAR.

Sous Programme Privatisation

Dans le cadre de la privatisation, les filières thé, café et pyrèthre bénéficieront d'un appui financier destiné principalement à :

- mener des études et renforcer le processus de formation en accompagnement au processus de privatisation de l'OCIR Thé et de la SOPYRWA;
- contribuer aux investissements publics précédant et accompagnant le processus de privatisation de la filière thé : maintenance des systèmes de drainages ; travaux sur les routes d'accès, réhabilitation des hangar et de bâtiments (*coût estimé: 65.000 €*) ; formation des paysans, des agronomes et vulgarisateurs agricoles, équipements divers, mesurage et bornage des plantations industrielles.
- contribuer au renforcement des capacités de séchage des fleurs de pyrèthre et à l'augmentation de la disponibilité de semences améliorées de pyrèthre.

Sous Programme Diversification

L'appui à la diversification des filières de production à l'exportation prévoyait un Fonds de diversification, dont le montant pourrait atteindre 2.000.000 €. Une étude préalable devait permettre de déterminer la faisabilité d'un tel appui et, le cas échéant, le statut juridique et les modalités pratiques de gestion du Fonds.

Sous Programme Décentralisation

Le programme soutenait deux volets de la décentralisation :

- la poursuite des actions entreprises dans la première phase du Projet Infrastructures Sociales visant notamment la mise en place de programmes de développement rural et d'actions sociales identifiées par les communautés de base, représentées et soutenues par les Comités de Développement Communautaire;
- la mise en œuvre de certaines activités du PNRP / Programme National de Réduction de la Pauvreté au sein du Ministère des Finances.

➤ Description du programme

Composante 1 : Sous Programme Café

A) Appui a l'OCIR Café

Ce sous-programme d'un montant initial de 9.465.676 € (environ 6,62 milliards de FRw au taux de 700) est le plus important du projet et a bénéficié d'un appui spécifique au niveau de l'assistance technique (2) et du nombre de cadre nationaux (3) engagés pour appuyer l'OCIR Café dans la mise en œuvre de ce volet.

Les actions menées au cours de cinq devis programmes successifs, sont réparties en trois volets principaux :

- appui à la production ;
- appui aux associations ;
- appui à la commercialisation.

Bilan

Le STABEX a permis de redynamiser le secteur du café rwandais par une contribution significative en matière d'appui à la production, de restructuration et dynamisation des coopératives et de marketing. Cet appui, qui représente environ 60% des budgets annuels de l'OCIR café, a donc grandement contribué à la réalisation des objectifs qui lui avaient été assignés par le Gouvernement.

Dans le domaine de la production, le STABEX a notamment financé la mise en place de plus de 3.000 pépinières réparties dans tous les Districts du pays. Celles-ci ont produit environ 80.000.000 de plants de café soit quatre fois plus que la quantité prévue initialement dans le COM STABEX. A raison de 2.000 plants / ha, cela représente une superficie plantée de près de 40.000 ha.

Le recépage et l'arrachage de 17 millions de caféiers soit une superficie de 8.000 ha ont également largement contribué à la régénération du parc caféicole existant. L'objectif initial était de remplacer le tiers du verger café.

Toujours pour intensifier la production, d'importantes quantités d'insecticides (206.000 l), de fongicides (39 T), d'engrais NPK (2.600 T) ont été fournies à l'OCIR Café.

En matière de restructuration des producteurs de café et d'organisation des coopératives, 148 coopératives ont vu le jour dont 106 ont obtenu le statut juridique. Quinze (15) unions regroupant 64 coopératives ont été constituées dont 11 possèdent la personnalité juridique. Pour renforcer leurs capacités d'organisation et de gestion, de nombreuses sessions de formation ont été dispensées aux responsables de l'ensemble des coopératives.

Parmi ces coopératives et unions, une quarantaine d'associations et douze Unions de coopératives ont bénéficié d'une assistance particulière du COM STABEX : cinq coopératives ont reçu un financement pour la construction d'une SDL, quatorze SDL existantes ont obtenu un financement pour travaux complémentaires, six magasins bureaux ont été construits par le projet, vingt cinq coopératives et caféiculteurs privés ayant leur propre SDL ont bénéficié de divers équipements (36 dépulpeuses, 31 groupes électrogènes, 25 pompes, 60 ventilateurs, du matériel de séchage).

Le projet a aussi assisté l'OCIR Café dans la gestion du programme par la prise en charge de certaines dépenses en personnel et fonctionnement : salaires et fonctionnement de quatre cadres basés au siège, fourniture et entretien d'un véhicule pick up, de 54 motos et 220 vélos,

salaire d'un chauffeur, primes aux 287 animateurs, frais de déplacement et communication des 60 techniciens supérieurs (TS,) frais de mission et primes pour cadres de l'OCIR Café.

Le programme Stabex a également permis à l'OCIR Café de réaliser un recensement général du café en 2009, de mettre en place son SIG et de permettre, à plusieurs cadres de l'OCIR Café ainsi qu'à des membres de certaines associations caféières, de participer à différentes foires, expositions internationales et stages de formation « dégustation café ».

B) Etablissement d'un laboratoire in vitro à l'ISAR (Rubona)

L'Institut des Sciences Agronomiques du Rwanda (ISAR) est un établissement public ayant pour objet de «promouvoir le développement scientifique et technique de l'agriculture et de l'élevage au Rwanda». Ainsi, il contribue à la production de plants de café sains et à haut potentiel de rendement pour permettre d'améliorer la production en quantité et en qualité.

A l'issue d'une étude réalisée en 2002 et qui a conclu à l'intérêt de l'installation et de l'exploitation par l'ISAR d'un laboratoire de culture in vitro de caféiers, le programme COM STABEX 96 / 99 a pris en charge ce financement en prévoyant la construction et l'équipement d'un laboratoire in vitro (Rubona) et de deux serres (Rubona et Ntendezi), l'appui d'un spécialiste en biotechnologie, le recrutement et la formation du personnel scientifique ainsi que les frais de fonctionnement.

Bilan

Le calendrier d'exécution des travaux a accusé un retard important, la phase opérationnelle de production de vitro plants a finalement été lancée en juin 2008, avec l'appui de spécialistes en biotechnologies et l'acquisition d'équipements complémentaires (véhicule, groupe électrogène,...).

Après avoir connu des difficultés de mise au point du process de culture, liées au caractère innovant de la technique au Rwanda, et avec l'appui de consultants en biotechnologie kenyans, les premiers vitro plants café ont été produits en septembre 2009. En fin d'année, 5.668 explants étaient en phase d'initiation, 19.303 plantules en germination et 2.053 plantules en serre.

Composante 2 – Sous Programme Privatisation

A) Appui à la privatisation de la filière THE

Juste après le génocide, le Gouvernement a identifié le secteur théicole comme prioritaire. Ainsi, l'Union Européenne en particulier a contribué pour plus de 20 millions d'Euros pour le programme de relance de l'industrie théicole, dans le cadre des transferts STABEX 1990 – 1991. Les dix domaines théicoles ont bénéficié de financements importants pour la réhabilitation des usines et des plantations.

Actuellement, la filière thé du Rwanda occupe environ 12.000 ha de plantations répartis sur 11 domaines théicoles dont cinq sous la gestion de l'OCIR Thé (Kitabi, Mulindi, Mata, Gisakura, Shagasha) et six unités privées (Rubaya, Pfunda, Nyabihu, Cyohoha-Rukeri et Nshili-Kivu). Elle a produit 85.698 T de feuilles vertes en 2008 soit environ 19.044 T de thé sec. Les onze domaines théicoles sont situés sur la carte en annexe 11.

Les principales caractéristiques de cette filière peuvent être résumées ainsi :

- des structures de production associant usines, blocs industriels, plantations villageoises et coopératives (les usines et les blocs industriels appartiennent et sont gérés par l'OCIR Thé sauf SORWATHE, la PTC / Pfunda Tea Company, Rubaya, Nyabihu et Gisovu) ;

- des conditions de production très différenciées entre plantations de marais et plantations de collines ;
- des rendements variables selon les unités, mais généralement faibles et laissant une marge d'amélioration importante ;
- des exportations faites en thé noir ordinaire – donc sans valorisation particulière des terroirs et de la qualité – pour la plus grande partie selon la procédure de ventes aux enchères ;
- l'appui de divers bailleurs (FIDA, USAID,...).

Les objectifs généraux de la politique du Gouvernement concernant la filière thé sont les suivants :

- augmenter les revenus en milieu rural ;
- augmenter les recettes d'exportation du pays par l'accroissement de la production, avec un objectif de rendement de 2.500 Kg/ha proposé pour l'horizon 2010, et l'amélioration de la qualité du thé ;
- améliorer le marketing et la commercialisation.

Le financement du COMSTABEX s'inscrit dans ces objectifs et les actions réalisées ont été essentiellement la réhabilitation des canaux de drainage, des pistes d'accès et des hangars, la formation, l'acquisition des équipements OPA, le bornage, le salaire et fonctionnement de l'assistant administratif et de l'ingénieur TP, des primes diverses ainsi que le cofinancement de l'installation et de l'entretien d'une pépinière.

Bilan

Le financement du COM STABEX 96 – 99 au secteur théicole, a permis de résoudre une partie des problèmes que connaissait l'OCIR Thé depuis quelques années :

- les problèmes d'inondation liés au drainage des marais théicoles ont été atténués avec le reprofilage d'une longueur importante de drains primaires, secondaires et tertiaires dans sept UT ;
- l'état de certaines pistes a été amélioré grâce à la réhabilitation de huit pistes soit 105 km et la construction de quatre ouvrages de franchissements sur la Mulindi ;
- une centaine de hangars de collectes ont été construits/réhabilités pour les coopératives ;
- trois U.T. ont été bornées dans le cadre des opérations de privatisation en cours ;
- une pépinière de sept millions de plants, a été implantée dans l'UT de Gisovu,;
- les OPA théicoles ont été équipées en matériel et les responsables, ont bénéficié de formations ainsi que les cadres de l'OCIR et des U.T.

B) Appui au développement de la filière Pyrèthre

Au Rwanda, le pyrèthre était une culture pratiquée dans le nord-ouest du pays. Après une période de déclin dans les années post génocides, cette culture a montré de nouvelles opportunités suite à l'augmentation de la demande sur le marché international. Actuellement, les statistiques d'exportation place le pyrèthre à la troisième place des cultures de rente au Rwanda après le café et le thé.

Dans sa politique agricole nationale, le Gouvernement s'est proposé de mettre en place des mécanismes susceptibles d'augmenter sa production et sa qualité. Ainsi, le MINAGRI a décidé d'augmenter la production du pyrèthre en l'étendant à d'autres zones productrice et en augmentant le nombre de pyrèthriculteurs.

Dans ce cadre, un protocole d'accord d'un montant de 200.000 € a tout d'abord été signé avec la SOPYRWA en 2002. Il était destiné à appuyer les 15.000 familles de planteurs de pyrèthre de la région des volcans, regroupés au sein de la Fédération Coopérative ISHYABIKI, avait pour objectif de remplacer le séchage des fleurs de pyrèthre à l'aide de bois de chauffage par des séchoirs solaires. Cela avait pour avantage principal de contribuer à la protection de l'environnement tout en développant la culture du pyrèthre.

Bilan

Deux DP ont par la suite été signés avec le RHODA, pour étendre les superficies sous pyrèthre aux Districts de Karongi et Rutsiro (Province de l'Ouest), de Burera et Gicumbi (Province du Nord).

Le DP n°1 a donné la priorité à la fourniture de souches et de fumure organique, ainsi qu'à la construction de séchoirs. Ce programme d'extension a connu des difficultés diverses, notamment le manque de disponibilité de matériel végétal pour la multiplication, ce qui a entraîné un retard considérable dans son exécution. Compte tenu des délais de mise en œuvre du STABEX, le RHODA et le MINAGRI ont proposé en septembre 2009 un nouveau programme d'action impliquant les coopératives de cultivateurs de la zone de production actuelle (Musanze), encadrées par la Sopyrwa, en s'appuyant sur le dispositif de cette dernière pour accélérer le rythme d'intervention. L'objectif du nouveau programme est de mettre en place un maximum de champs semenciers qui auront un effet multiplicateur sur l'extension des zones de culture et sur la qualité des plantations. Il est couplé à un programme de diffusion de séchoirs solaires qui impacteront également sur le taux de pyrèthrine de la production paysanne, et donc sur son prix d'achat.

Le développement de cette nouvelle stratégie a connu des retards importants et la signature d'un avenant d'extension du DP d'une durée de 6 mois et sans impact budgétaire est prévue.

Composante 3 – Sous Programme Diversification

Initialement, la Convention de Financement prévoyait un fond pour appuyer la diversification des filières de production destinées à l'exportation ; une étude préalable devant permettre de déterminer la faisabilité d'un tel appui et, le cas échéant, le statut juridique et les modalités pratiques de gestion du Fonds.

En 2002, une étude de diversification a été menée par le cabinet IDC. Une seconde action a eu lieu début 2006 avec l'analyse d'échantillon de miel de la forêt de Nyungwe qui a conclu à la conformité de ce miel avec les normes de l'Union Européenne.

Mis à part ces deux actions, rien n'avait été vraiment engagé sur cette composante avant la rédaction du rapport BDPA 2003 – 2006.

Ce n'est qu'en date du 30 août 2007 que la DCE a donné son accord à l'ON sur sa proposition d'affecter le reliquat de ce sous programme à deux volets : (1) l'aménagement de terrasses radicales, (2) l'appui aux projets de diversification.

A) Aménagement des terrasses radicales

Cette activité s'inscrit dans le contexte du processus de décentralisation, tout en rejoignant les objectifs de la politique nationale en matière d'environnement et de stratégie de transformation du Secteur agricole.

Elle participe au processus de responsabilisation progressive des autorités et des services centralisés et décentralisés grâce au rôle qui leur est réservé dans la planification et la mise en œuvre, tout en ayant un impact environnemental majeur.

L'approche stratégique retenue est d'impliquer étroitement l'ensemble des acteurs locaux à savoir : les bénéficiaires, les autorités administratives de base, les organisations locales de producteurs (les comités de contact).

Le programme est financé pour un total de 3,65 M d'€, montant qui couvre les activités de coordination par le RADA (sur le plan technique mais aussi administratifs; mémoires de dépenses, procédures de passation des marchés,...) et le financement de six DP qui ont été signés avec les autorités locales des Districts retenus par le MINAGRI (Burera, Rulindo, Gasabo, Nyaruguru, Karongi et Nyabihu).

Par ailleurs, compte tenu des contraintes environnementales majeures rencontrées au niveau du District de Nyabihu (qui ont limité le potentiel des terrains aménageables en terrassement radical), et de l'intérêt de développer et tester un référentiel pilote pour la protection des zones les plus exposées, une partie du financement du programme a été allouée à l'étude et à la mise en place d'aménagements antiérosifs à l'échelle du bassin versant de Jenda. Cette intervention s'inscrit également en complémentarité de la réhabilitation de l'axe Ruhengeri-Giseny (financement 9° FED) à la protection duquel il devrait contribuer durablement dans sa partie la plus sensible aux phénomènes érosifs. Le rapport d'étude a été remis en décembre 2009 et les travaux seront réalisés début 2010.

Une évaluation spécifique de cette composante a été conduite début 2010, incluant une étude d'impact et une analyse économique et financière, l'objectif étant de dégager les enseignements et leçons que l'on peut capitaliser de l'approche retenue et de faire des recommandations en vue d'améliorer la programmation et la mise en œuvre des futures interventions à l'échelle nationale. Cette évaluation était également l'occasion de définir des référentiels à l'usage des Districts, notamment dans l'optique de la mise en œuvre du 10ème FED qui comprend un appui budgétaire à l'agriculture décentralisée de 20 Millions d'euros.

B) Projets de diversifications agricoles

Le volet d'appui aux projets de diversification est financé pour un montant total de 1.065.345.713 FRW. Il vise en particulier, à développer des initiatives privées de développement soutenables en vue de la diversification des sources de revenus liées aux activités agricoles et de l'élevage ainsi qu'à leur transformation. Un appel à proposition lancé en 2008 a permis la sélection de 16 projets qui bénéficient d'une subvention oscillant entre 40 et 70 millions Frw. Ce programme est coordonné par le MINAGRI, et géré conjointement avec la cellule d'appui à l'ON.

Les 16 projets ont débuté leurs activités en avril 2009, après avoir reçu leur avance de démarrage. Les promoteurs ont suivi une session de formation de 3 jours à la gestion des subventions FED organisée à Kigali en mai 2009.

Ces projets couvrent des aspects variés de la production, projets d'élevage (caprins; porcins; apiculture; sériculture et pisciculture); d'agriculture traditionnelle (pomme de terre et soja); cultures non traditionnelles (champignon et macadamia) et activités liés à la transformation (farine de maïs, huiles essentielles et laiterie) pour lesquels ils proposent des démarches de valorisation innovantes. La plupart des projets devraient se terminer à la mi 2010, certains devront toutefois se prolonger jusqu'en septembre. Un agent chargé du suivi évaluation a été recruté en Octobre 2009. Il est en charge du suivi de l'exécution des activités par des missions de terrain fréquentes, de l'assistance aux bénéficiaires dans la préparation des mémoires de dépenses, de leur vérification technique et du reporting à l'intention du comité de gestion. Ce dernier regroupe les représentants des parties prenantes (MINAGRI, DUE, CAON et STABEX). Il

se réunit chaque mois pour évaluer l'état d'avancement des projets dont la mise en œuvre se déroule de façon satisfaisante, sans contrainte majeure notable.

Composante 4 – Sous Programme Décentralisation

Deux actions ont été menées dans le cadre de ce sous programme : appui au Programme National de Réduction de la Pauvreté (PNRP) et appui au programme infrastructures sociales.

A) Appui au Programme Infrastructures Sociales

Un premier DP a été signé le 1er décembre 2001 avec le MINALOC pour un montant de 1.000.000 Euros. Sa période de validité allait du 10 décembre 2001 au 31 décembre 2002.

Un avenant à ce DP a été signé pour étendre sa période de validité du DP1 du 1er janvier 2003 au 31 décembre 2003.

B) Appui Programme National de Réduction de la Pauvreté (PNRP)

Ce programme soutenait la démarche Ubudehe qui est une pratique traditionnelle rwandaise qui consiste à travailler collectivement afin de résoudre certains problèmes. Dans le contexte actuel, elle a pour objectif de raviver et stimuler l'action collective au niveau des cellules ; elle développe des systèmes de budgétisation et de planification, qui articulent les besoins des cellules en s'appuyant sur les comités locaux de développement.

Un DP d'un montant de 404.333.000 FRw a été signé avec le MINALOC le 15 avril 2002 pour une période de validité d'un an.

Pour ces deux DP, le montant total dépensé est de 1 642 934 Euros.

En date du 22 septembre 2008, le reliquat de 335.548 Euros a été affecté aux lignes « café », « privatisation », « diversification » et « audit / évaluation ».

Composante 5 - Sous-programme Assistance technique

Vu la complexité du programme COM STABEX, une assistance technique a été mise en place pour accélérer, suivre et coordonner sa mise en œuvre.

Ce contrat d'assistance technique (n° 2003/007/UE/MS) a été signé le 6 mars 2003 avec le Cabinet international BDPA (Bureau pour le Développement de la Production Agricole) pour une période allant du 6 mars 2003 au 5 mars 2006. D'un montant de 1.690.342,50 €, il comprenait notamment le Coordinateur du programme COMSTABEX, un Expert chargé de la coordination et du suivi du sous-programme café, un Expert chargé d'orienter l'appui aux activités de structuration paysanne de l'OCIR Café.

Par la suite, plusieurs réaménagements de ce contrat ont eu lieu, notamment :

- L'avenant n°3 qui a ajouté un expert local « procédures et comptabilité », ce qui portait la Cellule Stabex à quatre personnes.
- L'avenant n°5, signé le 27 mai 2008, qui a prolongé le contrat de douze mois et fixé le montant final du contrat à 2.536.514 Euros.

Les prestations du Coordinateur se sont terminées le 30 juin 2009. Un avenant N°6 et un courrier de réallocation budgétaire ont permis de prolonger d'un total de 2,5 mois les prestations et de l'Expert local en comptabilité et procédures FED, qui devraient prendre fin au mois d'avril 2010.

Composante 6 - Sous-programme EVALUATION ET AUDIT

Avant la fin de l'année 2003, des audits comptable et financier du COM STABEX 96 - 99 (DP1 café, DP1 Thé, Protocole pyrèthre,...) ont eu lieu pour un montant engagé de 36.393 €.

Les audits ultérieurs à l'année 2006 sont :

- audit comptable et financier COM STABEX (avril 2008) pour un montant de 13.874 € par le Cabinet AUGECO ;
- audit DP1 ISAR et DP2 Café pour un montant de 12.811 € par le Cabinet AUGECO ;
- audit DP2 ISAR pour un montant de 9.480 € par le Cabinet DELOITTE & TOUCHE ;
- audit DP3 Café et DP2 Thé pour un montant de 21 432 € par le Cabinet AUGECO avec remise du rapport final le 20 novembre 2008. Un avenant à cet audit d'un montant de 4 928 € a été commandé pour évaluer les actions de suivi / contrôle menées par l'OCIR Café dans la mise en œuvre de ses pépinières du DP4
- audit des cinq DP qui se sont terminés fin 2008 (DP4 Café, DP3 ISAR, DP3 Thé, DP1 Pyrèthre, DP1 Rada terrasses radicales) par le Cabinet Augeco pour un montant de 37.500,00 Eur.

Début 2010, une évaluation spécifique du programme de terrasses radicales a été conduite par le bureau Agriconsulting . Elle a intégré une importante composante ECOFIN destinée à évaluer les effets et impacts des réalisations, de dégager les enseignements et leçons que l'on peut capitaliser de l'approche retenue et de faire des recommandations en vue d'améliorer la programmation et la mise en œuvre des futures intervention à l'échelle nationale. Cette évaluation s'inscrivait dans le cadre de la définition de référentiels à l'usage des Districts, dans la perspective de la mise en œuvre du 10ème FED qui comprend un appui budgétaire à l'agriculture décentralisée de 20 Millions d'euros.

L'évaluation finale du COM 96-99 sera conduite sur l'ensemble des composantes, à la fin de leur période d'exécution (mai-juin 2010).

Au 31 Décembre 2009, la situation financière du COM STABEX se résumait comme suit :

- le montant total de l'engagement primaire dans le COM STABEX 96/99 après la réallocation du 22/09/2008 est de 23.833.933 € ;
- Les montants engagés sont de 23 832 023 € soit 99.9 % du budget total du COM STABEX 96/99 après la réallocation ;

Les montants payés, y compris les avances initiales décaissées sur les différentes régions en cours et les contrats en engagements spécifiques, représentent quant à eux 20.397.890 € soit 85% du budget total.

Documents disponibles sur pour réaliser l'évaluation

- Programme Indicatif National et Document Stratégique Pays 10^{ème} FED de Coopération entre la Commission Européenne et le Rwanda
- COM STABEX Rwanda 90-96 et son avenant N°1
- Devis programmes et protocoles d'accord des différentes composantes (30)
- - Rapports Semestriels de l'Assistance Technique Stabex 1 à 11 (2004 à 2008)
- Rapport Annuel Stabex 2005, 2006, 2007, 2008
- Stratégie d'utilisation des fonds Stabex Juillet 2007
- Mission d'Evaluation Programme Stabex - AIDCO (2006, 2007)
- Rapport d'exécution technique des activités Assistance Technique Stabex 2003 - 2006
- Analyse Economique et Financière de la Filière Café – BDPA (2005)
- Rapport Final de la cellule de coordination de l'Assistance Technique Stabex (31/05/2009)
- Minutes des réunions techniques des comités de suivi des différentes comosantes
- rapport d'évaluation et d'analyse Ecofin du programme de terrasses radicales (en cours)
- Sector Policy for the Agriculture Transformation (SPAT 2)
- Rapport d'Audit Financier Stabex – AUGECO (2000 - 2002)

- Rapport d'Audit Financier Stabex – AUGECO (2003 - 2006)
- Rapport d'Audit DP2 Café et DP1 ISAR – AUGECO (2007)
- Rapport d'Audit DP1 CAFE, DP1 Thé, Protocole Pyrèthre – KPS (2005)
- Rapport d'Audit DP3 Café et DP2 THE – AUGECO (2008)
- Rapport d'Audit DP2 ISAR – DELOIT & TOUCH (2008)
- Rapport d'Audit DP4 Café, DP3 ISAR, DP3 THE, DP1 RHODA, DP1 RADA – AUGECO (2009)

Par ailleurs, il sera possible de consulter et d'obtenir les documents plus généraux établis par les institutions rwandaises relatifs à la réduction de la pauvreté (PRSP 2 = EDPRS, Vision 2020, etc), et les stratégies nationales dans différents secteurs d'intervention (agriculture, land reform, décentralisation, HIMO,...).

DESCRIPTION DE LA PRESTATION ATTENDUE

➤ Objectifs globaux

Il s'agit de réaliser l'évaluation des différentes composantes du programme financé dans le cadre du COM STABEX 96-99 décrites ci-avant.

➤ Objectifs spécifiques

a/ en ce qui concerne l'évaluation

Les effets et les impacts de la réalisation des différentes composantes du programme seront définis en vue de dégager les enseignements et leçons que l'on peut capitaliser de leur mise en œuvre. Des recommandations visant à la pérennisation de ces effets et impacts seront formulées afin d'améliorer les futures interventions dans les secteurs concernés.

L'analyse des consultants devra porter sur les cinq critères clés d'évaluation (pertinence, efficacité, impact, viabilité) et les différents éléments des cadres logiques.

En ce qui concerne les composantes "Café" et "Privatisation", une attention particulière sera apportée à la mesure de la performance des interventions, raisonnée dans le cadre d'une approche "filiale". La contribution du programme STABEX au développement des secteurs concernés, son impact sur les niveaux et la qualité des productions, ainsi que sur les revenus générés, tant au niveau des producteurs que des agents en amont et en aval des filières sera quantifiée. Au niveau macro-économique, l'impact sur la balance commerciale et le PIB du Rwanda sera également estimé.

L'évaluation servira également à vérifier si la mise en œuvre du programme répond bien aux besoins des collectivités locales et des bénéficiaires ainsi qu'aux politiques nationales de lutte contre la pauvreté (EDPRS), de développement agricole (SPAT 2) d'environnement, de décentralisation et de réconciliation nationale.

Cette évaluation sera également l'occasion de tirer des enseignements de la mise en œuvre du programme, dans la perspective des futures allocations de fonds communautaires (10ème FED, Food Facility,...) qui sont prévues pour le secteur agricole.

L'évaluation prendra en considération de manière transversale les différents aspects liés aux questions de genre et d'environnement.

➤ Services demandés et résultats attendus

Comme déjà mentionné, l'analyse du consultant devra porter sur les cinq critères clés d'évaluation (pertinence, efficacité, impact, viabilité) et les différents éléments des cadres logiques.

(i) Evaluation de la pertinence du programme

Il conviendra d'évaluer la pertinence du programme auprès de chacune des catégories d'acteurs impliquée (producteurs, transformateurs, collectivités locales, institutions nationales,... avec un accent particulier sur les bénéficiaires finaux qui sont les agriculteurs (cultivateurs de productions vivrières ou de rente), regroupés ou non en coopératives. La mission analysera la cohérence et la contribution du programme aux politiques du gouvernement en matière de réduction de la pauvreté, de développement agricole durable et d'environnement, d'intégration et de réconciliation sociales,... . Il analysera la qualité des cadres logiques : clarté et cohérence interne des objectifs globaux, de l'objectif spécifique et des résultats énoncés, pertinence des indicateurs objectivement vérifiables (IOVs). Le degré d'insertion et la portée des intervention dans les différents maillons constitutifs des filières concernées sera analysée.

La mission devra également évaluer la pertinence du programme par rapport aux objectifs de la Commission européenne, en particulier au niveau de ses stratégies de développement rural, de lutte contre la pauvreté, de protection environnementale,...

(ii) Evaluation de l'efficacité du programme

La mission devra évaluer l'efficacité du programme du point de vue de la structure et des procédures de mise en œuvre du programme. Il conviendra de déterminer dans quelle mesure les résultats ont été à la hauteur des ressources, moyens humains et financiers mobilisées par les acteurs et si ces ressources ont été utilisées de manière performante et économe. La méthodologie de mise en œuvre et la réalisation du programme seront évaluées sous les aspects suivants:

- rôle des différents intervenants et relations entre eux;
- articulation des interventions dans les filières agricoles;
- moyens et analyse des coûts : adéquation des moyens mis en place, en quantité et en qualité; adéquation des ressources humaines utilisées; appréciation des coûts;
- modalités et procédures d'exécution: adéquation des procédures mises en place aux différents niveaux en vue d'atteindre rapidement des résultats : disponibilité rapide des fonds, passations des marchés, modalités de paiement ;
- implication des bénéficiaires et des différents intervenants;
- maîtrise de l'ensemble de l'exécution du programme : calendrier de mise en œuvre, adéquation aux problèmes rencontrés y compris la cause de ces problèmes, performance des mécanismes de coordination des différentes interventions,....

La mission devra également établir des comparaisons avec les programmes et leurs modes d'intervention mis en œuvre par d'autres institutions ou organismes.

(iii) Evaluation de l'efficacité du programme

La mission procèdera à une évaluation classique basée sur les indicateurs objectivement vérifiables tels qu'ils figurent dans les documents régissant le programme (réalisations physiques, nombre de bénéficiaires, etc). Il faudra également évaluer l'efficacité du programme par rapport à la situation du pays, et plus particulièrement:

- si les effets ont eu un impact significatif sur le niveau des performances des filières et ont induit des revenus additionnels conséquents,
- si le programme répond aux besoins des collectivités,
- si le programme cadre avec la politique nationale de développement,
- si le programme a ouvert des nouvelles perspectives pour les catégories les plus pauvres,
- si les réalisations respectent les prévisions,
- si le rapport coût-réalisation est correct,
- si la qualité de la réalisation est acceptable,

La mission procèdera à une analyse critique du programme qui portera aussi bien sur les techniques employées que sur les méthodologies organisationnelles visant à leur exploitation optimale.

Elle analysera notamment les aspects :

- conduite des travaux par la population locale vs utilisation du tissu entrepreneurial;
- évaluation des dispositifs de coordination, de supervision et d'encadrement;
- avantage/inconvénient des modalités de paiement (en cash, via compte bancaire);
- implication des services techniques et administratifs des districts et des secteurs et évaluation de leur capacité, notamment en termes d'encadrement technique et de gestion des fonds; (TR)
- résultats induits par la dynamique associative (coopérative), au niveau de la production, de la transformation, de la commercialisation,...;
- choix des itinéraires techniques, tant dans les travaux d'infrastructures, les systèmes culturels, les chaînes de transformation,...;
- ...

(iv) Evaluation de l'impact du programme

La mission devra décrire et évaluer les impacts du programme, bénéfiques ou négatifs, et définir dans quelle mesure le projet aura directement contribué à la réalisation des objectifs globaux.

D'un point de vue technique, la mission répondra aux questions suivantes: les activités réalisées répondent-elles aux problèmes rencontrés? Quels sont leurs impacts agronomiques (gains liés aux augmentations de rendements, plus values découlant des nouvelles spéculations culturelles,...), environnementaux, voire fonciers?

Les impacts financiers et économiques seront définis et quantifiés. Ils seront analysés sous l'angle de la contribution aux différents éléments de la chaîne de valeur des filières considérées (producteurs, organisations de transformation et de commercialisation, ...), ainsi qu'à l'aune de la contribution du programme à l'économie du pays (amélioration de la balance commerciale, contribution au PIB, générations de devises et de taxes,...).

Les impacts socio-économiques du programme sur les travailleurs et les agriculteurs seront estimés: Effets du programme sur l'amélioration des revenus individuels, sur les mécanismes individuels de tenure foncière et le marché de la terre, sur l'organisation des producteurs et leur accès aux marchés de commercialisation de la production agricole,.... La masse salariale versée et les revenus générés par les activités recourant à la haute intensité de main d'œuvre (HIMO) seront analysés sous l'angle de la réduction de la pauvreté et des éventuels effets multiplicateurs, notamment par la création de nouvelles activités génératrices de revenus.

Enfin, dans le contexte particulier du Rwanda, l'impact du programme sur les travailleurs et les bénéficiaires en termes de réconciliation nationale sera abordé.

La mission devra proposer une grille d'analyse permettant de répondre à un éventail le plus large possible de questions, notamment :

- quelles sont les améliorations aux conditions de vie ?
- quelles améliorations aux capacités organisationnelles des collectivités sont apportées ?
- quelles sont les améliorations des capacités générées aux différents niveaux (bénéficiaires finaux, organisations en charge de l'encadrement technique, services bancaires, services techniques et administratifs au niveau national, des districts, des secteurs, ...)
- quel appui est apporté aux gouvernements locaux?

- quel appui est apporté aux politiques nationales de développement (EDPRS, SPAT 2,...) et de décentralisation?
- y a-t-il des dynamiques nouvelles engendrées par les actions ?
- les techniques de réalisation sont-elles appropriées au milieu et aux bénéficiaires ?
- quel est l'impact du projet en termes de réconciliation?

(v) Evaluation de la viabilité des actions

La mission identifiera les aspects de viabilité les plus pertinents, une attention particulière sera donnée à :

- la pérennisation des effets induits au niveau des différents maillons constitutifs des filières concernées;
- la durabilité de l'impact en termes d'intensification agricoles et de lutte contre l'érosion;
- les contraintes telles que les problèmes fonciers ou de faire valoir sur les terres, pouvant affecter la durabilité des résultats;
- le degré d'appropriation des résultats du programme par des bénéficiaires (implication active, prise en charge responsable, prise en charge des frais récurrents liés à l'intensification agricole, etc.);
- l'analyse des bénéfices et des impacts qui pourront se produire à plus long terme

➤ Conclusions et recommandations

- D'une part, la mission synthétisera les points forts et les succès du programme au niveau de ses différentes composantes, et d'autre part, elle analysera les difficultés rencontrées et les échecs éventuels, afin d'en dégager des enseignements et identifier les enjeux ou les problèmes qui devraient être pris en compte dans la conception et la mise en œuvre de programmes similaires à l'avenir.
- La mission devra présenter ses principales conclusions de l'évaluation et formuler des recommandations spécifiques en matière de politiques de développement rural et économique soutenable et d'adéquations des instruments disponibles, mais aussi au niveau des aspects plus opérationnels de la mise en œuvre.
- Pour chaque conclusion, il devra y avoir dans la mesure du possible une recommandation correspondante.
- S'agissant d'une évaluation en fin d'exercice, la mission devra orienter ses recommandations dans la perspective des interventions futures de la Commission européenne, que ce soit au Rwanda ou dans d'autres pays aux spécificités similaires.

2. PROFIL DES EXPERTS

➤ Nombre d'experts demandés par catégorie et nombre d'homme/jour par expert

Budget estimatif de l'évaluation programme STABEX au Rwanda (2002-2010)					
Prix n°	Désignation	Unité	Quantité	PU Euro	Total Euros
Montant à Prix Unitaire					
1	1 agroéconomiste de catégorie I, chef de mission	Homme*jour (dont min 40 sur place)	55		
2	1 socioéconomiste de catégorie I	Homme*jour (dont min 20 sur place)	30		
3	Per diem au Rwanda pour les experts, (note 1)		60		
Remboursables					

4	Voyage internationaux experts. (y compris frais de visa) (note 2)	A/R	2		
5	Staff auxiliaire (note 3)	Homme*jour			
6	location de 1 véhicule pour mission de terrain (note 4)	Jour location			
7	Organisation réunion de restitution (location salle et logistique) (note 5)				
TOTAL					

Note 1: Le nombre d'homme*jour pour les experts est fixé à 85 jours. La répartition 55-30 proposée dans le tableau peut être modifiée par le soumissionnaire, tout en respectant les minima fixés sur les prestations au Rwanda. Si le nombre de jours prestés au Rwanda dépassent le nombre proposé (60), le soumissionnaire pourra ajuster le nombre de perdiem .

Note 2 : Voyages internationaux: deux voyages sont prévus, le soumissionnaire peut ajouter un troisième billet si la présence de l'agroéconomiste n'est pas continue.

Note 3: Staff auxiliaire : Il s'agit d'honoraires pour un éventuel accompagnement par des cadres nationaux qui seraient chargés de faciliter le travail des experts dans l'organisation des visites, l'interprétation lors des entretiens, la mise en contexte des actions,...

Note 4: Location de véhicule : 1 véhicule loué pour les missions de terrain, maximum 45 jours, remboursable sur base de facture

Note 5: A titre indicatif, la location pendant ½ journée, la mise a disposition du matériel de sonorisation et projection, le catering pour 50 personnes dans un établissement mid class de Kigali ne dépasse pas 1.000 €.

Profil demandé (formation, expérience, références et catégories, comme nécessaire)

a/ 1 agroéconomiste

Diplôme universitaire ou Mastère ou équivalent Bac + 4 minimum. Expert de catégorie I. Il aura un minimum de 10 années d'expériences professionnelles et se sera spécialisé en évaluation de programmes de développement en Afrique Subsaharienne. Il aura participé à des évaluations de programmes de développement agricole , incluant des analyses économiques de filières. Il parlera et écrira couramment le français et l'anglais. Une expérience spécifique au Rwanda constituera un atout.

b/ 1 socioéconomiste

Diplôme universitaire ou Mastère ou équivalent Bac + 4 minimum, spécialisé en programmes de réduction de la pauvreté. Expert de catégorie I, il aura un minimum de 10 années d'expériences professionnelles et il aura déjà participé à de nombreuses évaluations de programme de développement rural en Afrique. Il parlera et écrira couramment le français et l'anglais. Une expérience spécifique au Rwanda est vivement souhaitée.

➤ Langues de travail

Pour l'agroéconomiste et le socioéconomiste : français et anglais

Ceux-ci pourront être accompagnés en cas de besoin par des cadres locaux qui assureront la traduction entre ces deux langues et le kinyarwanda.

3. LIEU ET DUREE

➤ Lieux de la prestation

Rwanda, les activités développées par le programme couvrent l'ensemble du pays (tea estates, zones de production et transformation du café, aires de culture et d'extension du pyrèthre, station de recherche de Rubona, terrasses radicales localisées dans 6 districts, 16 projets de diversification répartis dans tout le pays, ...

➤ **Période de démarrage**

La mission arrivera au Rwanda au plus tard au cours de la seconde quinzaine de Mai 2010.

➤ **Durée prévue**

Environ 3.5 à 4 mois après la date de démarrage.

➤ **Planning**

L'évaluation aura une durée estimée à dix huit (18) semaines à compter de la date de démarrage et jusqu'à la date de remise du rapport final. Le planning suivant est envisagé:

T0 : Signature du contrat :

T0 + 2 semaines : Mobilisation des experts + travail préparatoire à distance avec DCE, ON, cellule STABEX + obtention des visas, etc :

T0 + 4 semaines : Mission de 6 semaines au Rwanda

- rencontre des représentants des institutions impliquées : DCE, Minécofin (Bureau d'appui à l'ON), MINAGRI, Cellule STABEX, OCIR Café, ISAR, OCIR Thé, RHODA, RADA, fédération du Secteur privé, ...

- visites de terrain: visite des projets et entretien avec les bénéficiaires; les activités développées par le programme couvrent l'ensemble du pays (tea estates, zones de production de café et de pyrèthre, station de recherche de Rubona, terrasses radicales dans 6 districts, 16 projets de diversification,...

T0 + 12 semaines : Envoi du premier rapport provisoire d'évaluation

T0 + 14 semaines : Observations sur le premier rapport provisoire d'évaluation

T0 + 16 semaines : Envoi du rapport final d'évaluation

T0 + 18 semaines: 10 exemplaires du rapport final d'évaluation et d'Analyse Ecofin reçus à Kigali

4. RAPPORTS ET FEEDBACK

➤ **Délai pour la soumission des commentaires sur les rapports provisoires :**

2 semaines maximum

➤ **Documents à produire par l'équipe de consultants au cours des deux missions de terrain**

- note de démarrage, à l'issue du travail préparatoire et précisant la méthodologie d'évaluation ainsi que l'organisation du travail. La note devra être approuvée par la délégation avant le démarrage des missions de terrain.

- rapport préliminaire d'évaluation ou notes de présentation qui sera remis aux différents intervenants de la réunion de synthèse. Ce rapport préliminaire ou note de présentation sera présenté lors d'une réunion de restitution avant le départ de la mission.

- rapport provisoire d'évaluation qui sera envoyé par email dans les 2 semaines suivant la mission au Rwanda.

- rapport final d'évaluation qui sera envoyé par email dans les 2 semaines suivant la réception des commentaires.

- CD ROM : 3 copies comprenant des versions éditables de:

Rapports et notes de synthèse

Base de données (si la méthodologie du soumissionnaire utilise la composition d'une base de données informatique)

Eventuelles photos digitales prises lors des visites de terrains

➤ **Contenu du rapport final d'évaluation**

a. résumé : rédigé de manière condensée, précise et exhaustive, il devra se concentrer principalement sur le but ou les questions clé de l'évaluation et de l'étude d'impacts, décrire les principaux points analytiques, indiquer clairement les conclusions principales, énoncer les leçons à tirer et proposer des recommandations spécifiques. Des renvois devraient être organisés vers les pages ou paragraphes correspondants dans le corps du texte principal.

b. Texte principal : le texte principal devra commencer par une introduction décrivant les programmes faisant l'objet de l'évaluation et les objectifs d'évaluation. Le corps du texte devra reprendre les 5 critères d'évaluations (la pertinence, l'efficacité, l'impact et la viabilité).

c. Conclusions et recommandations : pour chaque conclusion, il doit y avoir dans la mesure du possible une recommandation correspondante. Cela couvrira les cinq critères d'évaluation et l'analyse Ecofin.

d. Annexes : le rapport devrait comprendre les annexes suivantes (liste non limitative):

1. - les termes de références de l'évaluation
2. - les noms des évaluateurs et leurs CV
3. - la méthodologie de l'évaluation
4. - Matrices cadres logiques (originales et améliorées/ mises à jour le cas échéant)
5. - Carte des zones géographiques couvertes par les projets (le cas échéant)
6. - Listes de personnes / organisations consultées
7. - Littératures et documents consultés
8. - Autres annexes techniques (questionnaire, résultats de l'enquête, analyse statistique par exemple, etc)

➤ **Langue**













Tous les documents devront être rédigés en Anglais

➤ **Nombre d'exemplaires de rapport**





Le rapport final d'évaluation sera envoyé en 10 exemplaires. Il devra être finalisé dans un délai de 2 semaines après réception des observations. Un délai supplémentaire d'une semaine est accordé pour la transmission et réception du rapport final à Kigali.

ANNEX 2. Mission Planning

Planning Evaluation STABEX

S	Date	JN Perrin	G Germain	Activité
	mercredi 21 avril 2010			Signature contrat
S1	jeudi 22 avril 2010	1		Voyage TL Rwanda
	vendredi 23 avril 2010	2		TL Kigali / 1 ^{ère} Briefing EUD et stakeholders
	samedi 24 avril 2010	3		TL Kigali / travail sur documentation
	dimanche 25 avril 2010	4		TL Kigali / travail sur documentation
	lundi 26 avril 2010	5		TL Kigali /
S2	mardi 27 avril 2010	6		8h30 CAON / 11h OCIR Café
	mercredi 28 avril 2010	7		8h OCIR Café / 14h30 OCIR Thé
	jeudi 29 avril 2010	8		11h Minagri / DG RHODA pyrèthre
	vendredi 30 avril 2010	9		9h RADA Terrasses / 11h SG / 14h30 ISAR
	samedi 1 mai 2010	10		TL Kigali / travail sur documentation
	dimanche 2 mai 2010	11		TL Kigali / travail sur documentation
S3	lundi 3 mai 2010	12		9h Minagri Diversification à l'ON / 14h30 OCIR Thé siège
	mardi 4 mai 2010	13		Kigali / Note de démarrage  14h Terrasses Kigali (accompagné par Innocent Tél : 078883069)
	mercredi 5 mai 2010	14		 Zone Kigali OCIR café SDL Ntenyo pour la coopérative COCARU ABISHYZEHAMWE, District Ruhango (3Km de la route principale) (accompagné par Clémentine Tél : 0788504210)  Kigali / diversification chèvres et pisciculture (accompagné par Aimable Tél 0788467717)
	jeudi 6 mai 2010	15		 Gisenyi / 11h Piste Pfunda (accompagné par Jean de Dieu, Sylvie)  Gisenyi / diversification pomme de terre
	vendredi 7 mai 2010	16		 Ruhengueri SOPYRWA / séchoir pyrèthre USAID (accompagné par SHEMA Tél : 0788758226)  Ruhengueri / OCIR café 2 Grandes plantations de café dans le District Gakenke, Secteur Gakenke, Cellule Rusagara, 1. Propriétaire Baganaha Ildephonse (6000 Caféiers) (500m de la route principale); 2. Plantation de 40 000 caféiers pour le groupement de Rusagara. (5Km de la route principale) (accompagné par Pontien ou Clémentine)
	samedi 8 mai 2010	17		Retour Kigali / Travail de consolidation des informations
	dimanche 9 mai 2010	18		Travail de consolidation des informations
	lundi 10 mai 2010	19		 Butare / Laboratoire ISAR (Espérance Tél : 0788630366)  Butare / OCIR café Travaux de construction complémentaires dans la station de lavage de Maraba et équipements SDL pour la Coopérative ABAHUZAMUGAMBI (à 5Km de la route Principale). (accompagné par Eugène Tél : 0783744607)
	mardi 11 mai 2010	20		 Butare / Terrasses Nyaruguru (accompagné par Innocent Tél : 078883069)  Butare / diversification Apiculture et Dairy (accompagné par Aimable Tél 0788467717)
mercredi 12 mai 2010	21		 Byumba / Mulindi (accompagné par Corneille ou François Tél : 0788557270 ou 0788476670)	
jeudi 13 mai 2010	22		TL Kigali / consolidation des informations de terrain	
vendredi 14 mai 2010	23		TL Voyage Rwanda Europe	
	samedi 15 mai 2010			

	dimanche 16 mai 2010			
S5	lundi 17 mai 2010			
	mardi 18 mai 2010			
	mercredi 19 mai 2010			
	jeudi 20 mai 2010			
	vendredi 21 mai 2010			
	samedi 22 mai 2010			
	dimanche 23 mai 2010			
	S6	lundi 24 mai 2010		
mardi 25 mai 2010				
mercredi 26 mai 2010				
jeudi 27 mai 2010			1	Voyage Expert SE Rwanda
vendredi 28 mai 2010			2	Expert SE Rwanda
samedi 29 mai 2010			3	Expert SE Rwanda
S7	dimanche 30 mai 2010	24	4	Voyage TL Rwanda
	lundi 31 mai 2010	25	5	Team Kigali / briefing et départ sur le terrain
	mardi 1 juin 2010	26	6	☉ Butare / OCIR café, Coopérative UCAR et SHENGA SDL (équipements), District Kamonyi et SDL Nyamure pour la Coopérative Dutezimbere Kawa (à 11Km de la route principale), (accompagné par Eugène Tél 0783744607 ou Clémentine Tél 0788504210)
	mercredi 2 juin 2010	27	7	☉ Butare / SDL Bufcoffee (équipements) et travaux de construction complémentaires, District de Nyamagabe (accompagné par Eugène Tél 0783744607 ou Clémentine Tél 0788504210) ☘ Butare / Kitabi Thé (accompagné par Corneille ou François Tél 0788557270 ou 0788476670)
	jeudi 3 juin 2010	28	8	☉ Butare / SDL Kibingo, District de Gisagara (accompagné par Eugène Tél 0783744607 ou Clémentine Tél 0788504210) 🇷🇺 Butare / diversification Soja et Pisciculture (accompagné par Aimable Tél 0788467717)
	vendredi 4 juin 2010	29	9	☉ Zone Kigali / magasin et bureau de la coopérative Aburwagasabo (accompagné par Eugène Tél 0783744607 ou Clémentine Tél 0788504210) 🇷🇺 Zone Kigali / diversification légumes champignons (accompagné par Aimable Tél 0788467717)
	samedi 5 juin 2010	30	10	☘ SORWATHE et coopérative (accompagné par Corneille ou François Tél 0788557270 ou 0788476670)
	dimanche 6 juin 2010	31	11	Team Kigali / travail sur documentation
	lundi 7 juin 2010	32	12	☉ Kibuye / OCIR café Plantation dans le secteur Mubuga, cellule Kagabiro District Karongi, appui à la SDL Kibuye coffee Mountain (accompagné par Pontien ou Clémentine) 🇷🇺 Kibuye / diversification macadamia (accompagné par Aimable Tél 0788467717)
	mardi 8 juin 2010	33	13	☉ Kibuye / OCIR café SDL Gitesi/Gahizi (accompagné par Pontien ou Clémentine) ☘ Kibuye / nouvelles zones séchoir pyrèthre et coopérative (accompagné par Shema Tél : 0788758226) 🇷🇺 Kibuye / diversification Sériculture et Terrasses (accompagné par Aimable Tél 0788467717)
	S8	mercredi 9 juin 2010	34	14
jeudi 10 juin 2010		35	15	☉ Gisenyi / Plantation secteur Kivumu, cellule Karambi District Rutsiro; Coopérative INGOBOKA; SDL COOPAC Nyamwenda équipements (accompagné par Clémentine Tél : 0788504210) ☘ Gisenyi / Nyabihu Thé (accompagné par Corneille ou François Tél : 0788557270 ou 0788476670)

			 Gisenyi / Rubavu expérimentation pyrèthre (accompagné par Shema Tél : 0788758226)
			 Ruhengeri / SDL Bukonya Coffee (équipements) District de Gakenke. (voir Pontien)
			 Ruhengeri / coopérative pyrèthre (accompagné par Shema Tél. 0788758226)
			 Ruhengeri / diversification Huiles essentielles (accompagné par Aimable Tél 0788467717)
	vendredi 11 juin 2010	36	16
	samedi 12 juin 2010	37	17
	dimanche 13 juin 2010	38	18
S9	lundi 14 juin 2010	39	19
	mardi 15 juin 2010	40	20
	mercredi 16 juin 2010	41	21
	jeudi 17 juin 2010	42	22
	vendredi 18 juin 2010	43	23
	samedi 19 juin 2010	44	24
	dimanche 20 juin 2010		
S10	lundi 21 juin 2010	45	25
	mardi 22 juin 2010	46	26
	mercredi 23 juin 2010	47	27
	jeudi 24 juin 2010	48	28
	vendredi 25 juin 2010	49	29
	samedi 26 juin 2010	50	30
	dimanche 27 juin 2010		
S11	lundi 28 juin 2010	51	
	mardi 29 juin 2010	53	
	mercredi 30 juin 2010	53	
	jeudi 1 juillet 2010		
	vendredi 2 juillet 2010		
	samedi 3 juillet 2010		
	dimanche 4 juillet 2010		
S12	lundi 5 juillet 2010		
	mardi 6 juillet 2010		
	mercredi 7 juillet 2010		
	jeudi 8 juillet 2010		
	vendredi 9 juillet 2010		
	samedi 10 juillet 2010		
S13	dimanche 11 juillet 2010		
	lundi 12 juillet 2010		
	mardi 13 juillet 2010		
	mercredi 14 juillet 2010		
	jeudi 15 juillet 2010		
	vendredi 16 juillet 2010	54	
S14	samedi 17 juillet 2010		
	dimanche 18 juillet 2010		
	lundi 19 juillet 2010	55	
	mardi 20 juillet 2010		
	mercredi 21 juillet 2010		
	jeudi 22 juillet 2010		
	vendredi 23 juillet 2010		
	samedi 24 juillet 2010		

	dimanche 25 juillet 2010			
S15	lundi 26 juillet 2010			
	mardi 27 juillet 2010			
	mercredi 28 juillet 2010			
	jeudi 29 juillet 2010			
	vendredi 30 juillet 2010			
	samedi 31 juillet 2010			Rapport final d'évaluation x10
	dimanche 1 août 2010			

ANNEX 3. **Field Visit Report****Coffee*****District of Ruhango – New CWS Ntenyo for the cooperative COCARU ABISHYZEHAMWE***

The cooperative had 560 members and with the WS the number is now 810
 They process 75 MT of coffee cherry = 17 MT of parchment coffee, but they estimate 8 MT of ordinary coffee
 They produced a Business Plan for 300 MT
 They received a credit at 13% interest rate from BRD in 4 trenches
 In 2009 they pay minimum price RWF 122 instead of indicative price RWF 145, because they retain RWF 23 for fertilizers
 The selling price for fully washed green coffee is 1 900 whereas it was 570-700 in semi-washed, therefore the added value is 1300 per Kg.
 The WS is new with a good quality including, water supply and reservoir, reception tank, pulping machine, fermentation tanks and drying facilities.
 Total investment is about 102 million: building MRWF 63, pulping machine MRWF 7, electricity engine MRWF 8, pumps MRWF 8, other MRWF 0.2. The cooperative provided its counterpart for about MRWF 15, including the land purchase MRWF 3, raw material for construction MRWF 8, fences MRWF 3, other MRWF 0.5., thus representing a total investment cost of about MRWF 117.
 If their target is 200 MT, they can get 30 MT of green coffee (about 15%), then about MRWF 57 and they will pay MRWF 24.4, and get a gross income of MRWF 32.6. Therefore the pay back period is 3.6 years.

District Gakenke – WS Bukonya company coffee.

The owner was absent and it was impossible to get adequate information. But this WS has not been supported by STABEX. Only farmers have replaced a significant quantity of plants and received fertilizers.
 This cooperative provided the best quality in 2009. The quality of parchment appears to be the best that the mission has seen so far. It is owned by a private man who intends to sell shares to the cooperative to ensure the full capacity of processing. The cooperative comprises 1100 members, of which 35% of women.
 The WS processes 250 MT of cherries per year, but the capacity is about twice.

Butare - WS Maraba – additional building and equipments CWS for the Cooperative ABAHUZAMUGAMBI

The cooperative has 1352 members with 4 WS
 They process 261 MT of coffee cherry = 50 MT of parchment coffee, but they estimate that no ordinary coffee is sold by members.
 In 2009 they pay minimum price for cherries RWF 150 higher than the indicative price RWF 145, because they do not retain for fertilizers and have a good reputation. They were awarded in 2002 as 1st quality WS in Rwanda. They also pay RWF 15/kg at the end of the season.
 STABEX provided the storage facility (RWF 10 409 846), of excellent quality, 8m by 18m, about 145 M2. The capacity can store between 30 to 40 MT of parchment, which

means that now they limit the number of travels on this very bad road of about 10 kilometres. Apparently they also received drying facilities in 2003, but this is unclear.

Butare - Visit washing station WS of Remera Buffcoffee (District of Butare) - 01.06.10

Discussion with the owner of the WS:

Choice of the site: the presence of a source and many plantations in the surrounding area.

The owner produces herself coffee and markets it. She invested 31 MFW in 2003 for the WS construction (without STABEX), including land purchase, MRWF + 17 for the equipment, for a total amount of MRWF 48.

STABEX financed a hangar, 2 water tanks and 6 drying tables, for MRWF 33 + a generator for MRWF 7, for a total of MRWF 40. As average WS costs is worth between 80 and MRWF 100 with the equipment.

She produced 110 MT of parchment coffee in 2009. The main clients are 2 American companies and one Japanese woman.

The owner considers that the WS is profitable. This can be verified since she seems to get 38% of net profit.

The owner invested from her benefit and a loan of RWF 23 in a second WS, which is larger of 27%, at 7 km from the first WS.

Each of coffee cherries is paid 122 to the producers + RWF 23 /kg for manure (paid to OCIR), which means a total of RWF 145 /kg. In this WS, the owner paid RWF 130 kg of cherries of coffee to the producer and she pays RWF 160 this year (+ 23 FRW/kg for manure). Moreover, she gives a premium to the producers of 5 FRW/kg; the reason is the high competition to purchase cherries. By doing this, the owner wishes keep her suppliers.

Discussion with Mr. Savio M., seasonal worker for processing and maintenance - single person. He works 150 days/year at RWF 800, which means MRWF 1.2/year. Before the WS he was full-time farmer and did not have any other job. With the new wages he bought a cow, built a house and can save some funds.

Discussion with 3 young villagers, single people. They work 150 days/year at RWF 800, meaning MRWF 1.2 for each/year. Their parents are coffee producers in the same village.

- Miss Veronique M.: 24 years, working since 2006 in the WS. From her income, 25% are saved on a bank account, and she bought 4 goats and 3 sheep, and provides assistance to her parents. The others 6 months she produces and sells beer of Sorgo.
- Miss Pélagine M.: working since 2009 in the WS. From her income, 25% are saved on a bank account, and she bought 1 goat and 2 pigs.
- Miss Francine D.: working since 2008 in the WS. From her income, 25% are saved on a bank account, and she bought 1 pig, and provides assistance to her parents.

Discussion with 2 married women, Mrs. Judith M. and Mrs. Zeburiya N.. They are producing coffee with their husband. They say that before the WS, people in the village used to sell to the same WS owner. According to them, the income increased by 20% with the WS, and require less efforts (pulping and drying are not anymore made at home). They confirm both to save approximately 50% their income from coffee and, with their earnings they are able to pay the mutual insurance company for health, the student fees and all daily needs.

- Judith built an annex to her house and invested 25% of the wages, purchase live-stock when prices were low, to resell them in the peak season.
- Zeburiya has 600 coffee-trees today. With an average 5kg of cherry per tree, she gets 3.000 kg of cherries, means 600 kg of parchment.

VISIBILITY: no STABEX, but adhesive on the hangar and generator.

As conclusion: there is not any doubt that the WS takes part in the capitalization of the village, by processing and selling the coffee of the producers but also by paying an additional premium, acting as cooperatives.

Butare – New WS Kibingo and Cooperative COPROCAGI – 02.06.10

The cooperative had 400 members in 2004, and it was reduced to 62 in 2010, because the coop members accumulated MRWF 5.5 debts, including 4 for fertilizers and 1.5 for the workers' wages within 25% of financial contribution for the WS construction, in the RDB. They did not repay the RDB because of delinquencies. The board was changed 5 times since the beginning hence today the coop does not have the capacity to run the WS. Moreover the WS was finalized in April 2010 and was operational just after the peak season. So far they processed only 6 MT of coffee cherry as compared to the overall capacity of 100 MT. The OCIR CAFÉ placed a temporary manager and a cooperative specialist to run the WS and assist the coop.

Due to mismanagement and bribery committed by some members of the board of COPROCAGI after the viability of the coop has been assessed positively by OCIR Coffee in 2005, about 340 members left the organisation, which actually only registers 62 members in 2010 in comparison to about 400 in 2004 to. The coop has a debt amounting to 5.5 MRWF (4 million for fertilizers, which haven't been paid to OCIR and 1.5 million representing the wages of the workers on the site of the WS. In so far, the coop has currently no capacity to properly manage the WS, and the OCIR has nominated one of its agents to help reorganising the coop.

The board was changed 5 times since the beginning; hence today the coop does not have the capacity to run the WS. Moreover the WS was finalized in April 2010 and was operational just after the peak season. So far they processed only 6 MT of coffee cherry as compared to the overall capacity of 100 MT. The OCIR CAFÉ placed a temporary manager and a cooperative specialist to run the WS and assist the coop.

The potential production inside the neighbouring area is about 400 MT of parchment, with about 400 000 coffee plants, which means an adequate decision to establish a WS in this area. But the mission considers that the selection criteria for this coop were not appropriately undertaken. The Evaluation Team recommends a temporary management under control of the OCIR CAFÉ until reinforcement and self determination of the coop. in spite of having organized some mobilization meetings, the coop will unlikely be prepared for the next coffee season. The Evaluation Team also recommends that all transfers of ownership should be formalized with clear transfer of responsibilities.

The current marketing situation in ordinary coffee is very critical with about 300 RWF per kilo of parchment, which means about half of the current market trend in Rwanda.

The construction shows some deficiencies, in particular the absence of reception area, the inappropriate distance between the last washing tank and the dryer tables, and the absence of roofed pre-drying tables. The construction of the storage facility is satisfactory, including a good chaining.

New WS Nyamure (between Butare and Nyanza) - Cooperative Dutezimbere Kawa

The cooperative has 413 members but the board has changed many times since the WS was implemented. The construction was not achieved properly and many deficiencies are visible on the storage building and inside the WS, and the cooperative does not have the capacity to identify these problems:

- The storage is badly constructed, with unfixed gutters, ground with deteriorated concrete due to deficient mixture, deficient truss, and unsatisfactory chaining
- The fundament was larger than the 200 m² storage because the cooperative wanted to build an office, but the entrepreneur executed the work within the initial financial plan, hence he had to reduce the quality of the storage. The quality of the first works for the office building that has been made by the cooperative.
- The WS shows a very weak concept with the pre-drying area placed close to the reception area, the generator is not protected from rain, electricity wires are not protected, many tanks show failures, and wooden canals not clean.

The one disk pulping chain has been replaced by a 3 disk one, so as to meet the potential capacity of the WS (which is in line with the 400 trees of the coop members), about 100 MT of parchment coffee. With their members they should be able to buy the equivalent of 160MT of parchment. However the cooperative had to deal with RWAKOV to get a credit, since the credit from the “Banque Populaire” came too late. In 2008 they processed only 17MT and in 2009 only 18MT; so far in 2010 they have been able to process 97 MT. The production has been negotiated with RWAKOV at a minimum price of 3.6 USD per kg of green tea.

Kigali - New WS MUNUNU (Gasabo) and to the coop ABURWAGASABO- 04.06.10

This is the last WS new station which has been implemented by STABEX.

The contract with the enterprise in charge of the construction of the last of the 5 WS financed by the STABEX was signed in February 2008 and was to be ended in June 2008. Despite an extension of 5 months, the construction was completed only in March 2010 and the provisional acceptance conducted in April 2010. It appears that i) the enterprise didn't have the financial capacity to implement the work on time, which raises the question of the selection of firms qualified to perform such work, ii) the district which had donated the land to the coop in 2006 for constructing the WS has lastly decided to change the site for environmental reasons, iii) the beneficiary coop had to buy for 3.5 MRWF a new field by itself in another district and, consequently, to move all the building materials from the old to the new site. The final construction is, nevertheless, of very good quality and well designed.

Meeting with the vice-chairman of the coop, Mr. Aloys N.:

The coop has 104 members with 167.800 coffee trees, including 9.000 seedlings not yet productive, 30% young trees (more than 3 years old) and about 20% of the trees above 30 years old. The chairman of the coop alone would have about 35.000 trees. The members are spread in a radius of 25 km.

The producers would be rather old, the vice-chairman said, but young people would have difficulties to enter into the coffee production, because no land would really be available for them.

Until recently the merchants came to buy the cherries directly from the producers at a price of 130 RWF/kg, thus meaning a loss of 30 RWF/kg compared to the local market price (160 RWF/kg). The coop is, therefore, expecting the selling prices to increase of at least 30 RWF/kg thanks to the new WS.

According to the vice-chairman, the members of the coop are extremely motivated, which is shown by the fact that they didn't hesitate to invest in the ground and to move all the building materials from the previous site. They consider the WS as their property, he said, even if their contribution didn't yet reached the required 25% (it remains to pay and install a fence for reaching the expected contribution). They think to perform a better access and also to buy a piece of land below the existing WS, which currently forms an enclave in their field. The coop is hoping soon for an official transfer of property by OCIR Café.

With a foreseen production of 700 to 800 kg coffee cherries, representing about 140 to 160 metric tons of parchment, the coop is expecting to create some 30 jobs, including permanent and seasonal staff. This would certainly depend on the credit they would get for the first year, the vice-chairman added. Asking about a possible involvement of poor people, the vice-chairman said that those jobs would be primarily reserved for members of the coop and their families.

The vice-chairman also underlined the positive effect the WS would have on the reconciliation process: "Meetings between members are organised and the activities within the cooperative are a positive step on the way to reconciliation, but with the WS members will be much closer around common interests.

WS Kibuye Mountain Coffee – Kagabiru/ Kibuye

This WS is owned by a private person, but was not operational in 2009 because they did not reimburse their credit to the RDB. STABEX did not subsidize anything in the WS, that was created in 2005, but the owner seems to invest a lot in plantation, and benefited from 120 000 plants from the 300 000 plants produced by STABEX within the area. The other 180 000 remaining plants seem to have been used to replace old coffee trees but not for new extension. About 20 nurseries were involved in this production. He also received from RADA graft and non graft plants of macadamia that are in intercropping with coffee trees. We have been told that the 300 000 plants represent more than half all productive coffee trees in the area (500 000), in which operate 2 other similar SDL; however this statement could not be verified. The targeting of the owner of the SDL as one of the beneficiaries is questionable, because it appears to concentrate an important part of STABEX inputs on a private person who do not necessarily have the capacity to properly manage the cropping and/or post-harvest activity. In this specific case he is very weak on both sides. It doesn't mean that supporting private entrepreneurs should be discarded because in some cases the mission could verify that it was appropriate as some investor were dealing in a similar way to cooperatives. In this particular case, the plantation was very badly maintained, in spite of being implemented since 2005 – 2006. Regarding the nurseries, the mission did visit one of them, which apparently did perform well, but has not been fully paid so far (he has received only 60% of 200.000 RWF), because in some districts the OCIR discovered that the local control by the agronomist was not well realised. After physical control it seems that the loss rate in nursery is about 30% and the loss rate after re-plantation is at least 10%; transaction loss of 10% should be added for transport and various distribution problems, which means that the final loss rate from the initial OCIR forecast should be at least around 50%.

Visit to new WS Rulindo – 09.06.10

The WS was selected in coordination with the district, which designated the area to implement the plant, whilst the land was bought to a private person for 2 MRWF, as it is the case for many WS. The mission does not understand why the district is involved in this decision, since the selected land is not necessarily the most appropriate location for the farmers. Moreover: i) 4 other WS are already operating in the same area (within 20 km), ii) the slope is not sufficient to evacuate water and the drying area is located in a wet land, no study being undertaken by OCIR Café before implementation for evaluating the evacuation possibilities iii) the number of drying tables is not in line with processing target, meaning that they will have to double the existing number from 12 to 24.

The WS has a capacity of 100t parchment. With only 80 coffee producers and an estimation of 200 kg parchment/ producer in the area, the WS currently produces 16 t, meaning that 6 times more parchment could be produced (equivalent to 500 producers). In so far, the WS seems currently largely underutilized.

The WS is processing the best coffee cherries, whilst the poorest quality is processed through a traditional manual pulper (about 500 kg coffee cherries processing/day).

It seems that the quality of the production is not good enough to meet adequate yields in the WS. Apparently, the rate cherries/parchment is close to 7 instead of 5; the explanation being that they have some insect damages and rust disease that increase beyond 8% the lowest parchment quality.

In terms of HR, the WS currently employs 4 permanent staff (1 at 40.000 RWF/month, 2 at 35.000 and 1 at 30.000) and between 20 seasonal in low season and 27 in high season paid 700 RWF each/day. Even the permanent staff is paid on the credit of 49 MRWF taken for the 2010 production campaign (around 14MRWF estimated wages for 2010), thus meaning that about 35MRWF is remaining for purchasing the coffee cherries. At an average of 160 RWF/kg of cherries, they should, therefore, be able to buy about 218 t cherries, representing some 36 t of parchment coffee for the first year (not to forget that the WS has started too late in 2010 for immediately reaching a full production rate).

Discussion with 5 members of the coop INYONGERAMUSARURO (“Augmentation de la production”)

Frédéric N., coffee producer,

Xavier M., Supervisory Board member,

Emmanuel A., Member of the Board of Directors,

Faustin R., Animator,

Laurent R., Animator,

In addition:

Diogène N., Provincial Supervisor of OCIR Café,

Théophile R., T.S Coffee District Rulindo, Félicien N.,

The organisation of producers was first established in 1999 as an association, before becoming a coop in 2008. The coop currently has 46 members (4 women and 42 men) totalizing 31.550 coffee trees distributed within two districts and 10 sectors. The attendees have estimated 17% of the members having less than 300 trees, 42% 300 to 500 trees, 29% 500 to 1000 trees and 12% more than 1.000 coffee trees.

Before the establishment of the WS, the coop counted 1.200 members, but when it was to decide about the 25% contribution of the members for the construction of the WS, only 46 were ready and in the position to pay for, thus increasing their social part in the coop from 7.000 to 225.000 RWF. This actually helped reaching a total contribution amount of 10.350.000 RWF, instead of the 28.8 MRWF required (25% of 72 MRWF financing of the STABEX).

According to the persons interrogated, each tree would produce between 10 and 15 kg coffee cherries, 75% of the trees being less than 10 years old, but the production would have decreased by 15 to 20% between 2009 and 2010, notably due to rust disease (one of the producers would even have registered a decrease of about 75%).

Despite 4 other existing WS in the surroundings, the members declared their interest in the new WS for the following reasons: members would be more attached to their own WS; reducing works related to processing and drying would save time for other activities; the existence of the WS obliges the coop to restructure itself in a more efficient way and its members will gain in management and processing capacities; jobs would be gradually created as the production increases; the areas planted with coffee trees should also increase, thus leading to better incomes; the access to credit would be facilitated and, last but not least, the closer cooperation between all the members would contribute to the reconciliation process.

2 organisations (INADES and SNV) are currently helping the coop to establish its account preview and planning for the first year of production of the WS, as it has never been done before, thus meaning that the WS was designed and established without having any idea on the issue. However, the members also underlined the inappropriateness of the management training they have received, which they consider too theoretical and not really in line with their capacities. They would prefer training in the form of accompanying measures, more focused on their specific needs and understanding abilities.

Visit to WS NYAMUENDA District of Rubavu, sector Nyamyumba /Gisenyi - 10.06.10

Meeting with 10 coop members of which Mr Jean H., coop chairman, and Mr Deo M., WS manager. The WS was built in 2001 and 2001 with the assistance of USAID and inaugurated by the President of Rwanda in 2003. This is a very large WS, with high potential, since it is run by a cooperative of 2000 members, based in Gisenyi, and which also runs four other WS. For this sector the number of members is 871.

Since the beginning the total parchment production increased to about 300 MT of parchment:

Year	2003	2004	2005	2006	2007	2008	2009
Parchment MT	3	5	10	300	110	280	300

STABEX provided: one 3 disks pulping machine, one generator (which is not anymore in the WS but in the coop office of Gisenyi), building of 173 drying tables (20mX2m), providing 3000m sheds and Nylex nets.

Now with three pulping machines (8 disks) the processing capacity is between 400 and 600 MT. the drying area is very large, with not less than 400 drying tables, totalizing 180 MT per fortnight, therefore more than 1 400 MT for the overall campaign; therefore the drying area is overestimated. However the WS manager says that they intend to meet 600 MT or parchment per year, which seems very ambitious, and due to the peak season in March, he estimates that they would need to dry 400 MT.

The input from STABEX was made between 2004 and 2005, which explains the significant increase in production in 2006.

Coop members received training and apparently have improved the pest management (coffee rust, antesia, etc.). The impact of training looks quite good.

Tea

Pfunda tea estate and CoopTP

PTC manager did not want to attend the inauguration visit, because he estimates that the plant is not responsible for maintaining the road. The concerned area by the coop is 800 hectares whereas PTC has 260 hectares.

The rural road of 18 kilometres has been properly revamped and finalized in June 2008. The maintenance equipment has been left to the cooperative. The cooperative estimates that the travel time is now reduced from 2 hours to 40 minutes. There was no contribution of the recipient coop members to road refurbishing. The quality of the work is good with appropriate drainage canals. Apparently the cooperative has been able to collect about RWF 1 million per month for road maintenance.

The OCIR THÉ also improved the drainage. Collecting centres are well done.

Mulindi tea estate – visit of the road works and drainage discussion with the cooperative

The four bridges at the entrance of Mulindi estate have been built by STABEX and the cost was inflated (cost RWF 131 490 000 about € 47 000 fro each of the 4 bridges) because enterprises feared to work in this unstable peat moss.

Mulindi is not yet privatized manly because of the quasi absence of industrial plot. The largest part of the area is covered by COTEVEN (Village Tea) which provided 65% of the production with 1005 hectares and 3084 farmers. COPTHE provides 26% of the production with 575 hectares and 1000 farmers. Industrial plots contribute for 9% of the production with 175 hectares.

STABEX rehabilitated 15 collection centres that are quite adequate, and rehabilitated 2 earthen roads:

- 10 kilometres road within the village tea area which involve 212 hectares for 600 farmers
- 15 kilometres road within the village tea area which involve 320 hectares for 900 farmers

The selection of the roads has been made by the village tea cooperative. The quality of road rehabilitation is good but some dalots have been built at high cost, about € 1200 instead of probably half of this amount.

According to the the village tea cooperative, STABEX has rehabilitated 89 kilometres of drainage, but figures provided by OCIR THÉ show 554 kilometres.

The following table provided the breakdown of prices that are pais by the plant to the cooperative in RWF:

Farmer owner	31
Chemicals	22
Harvest	20
Bags	1
Operation Coop	8.3
Transport	9
Road Maintenance	2.7
Federation	1
Union	0.6
District Taxes	0.4
Reserve Coop	0.6
Total paid by plant to the coop	96.6

Kitabi tea estate

The Kitabi estate was officially privatized on September 9, 2009, with three shareholders: Rwandan Mountain Tea (60%), the Rwandan government (30%) and the coop KOBACYAMU, which is a village tea, (10%).

The estate comprised 397 ha, to which 54 ha have been recently added. On the other hand, the majority belongs to the village tea with 750 – 850 ha, split into different plots all around, but also inside the estate. The manager of the plant estimates that the demarcation of plot boundaries has not been properly undertaken, since it did not involve a negotiation to clearly segregate the industrial block from the cooperative plots, which are presently inserted inside the estate. However, the manager and the coop together estimate that this still remains negotiable.

From the estate and processing point of view it seems that the privatization offers better opportunities for partnership between the stakeholders. The extension of tea area is already a sign of common interest of both parties. It also appears that the relationship between the stakeholders is good, since the manager himself declared to be ready for cooperating to the maintenance of the rural roads.

Apparently, since the privatization, the marketing environment looks favourable as the estate has been able to negotiate good prices between 3.5 and 5 USD/kg, with the auction tea in Mombassa. It has to be mentioned that the estate has been certified ISO, is currently dealing with Rain Forest and intends to enter into Fair Trade business.

Moreover, the reference prices have also been more favourable for the farmers with an increase from 86.6 to 96.6 RWF per kg of green leaves.

There was no need for drainage in this area, but STABEX has rehabilitated one 6 km road inside the village tea area, which is in good shape. However, the six collecting centres, which have been rehabilitated in theory, are in very bad condition, which already deteriorated grounds, inappropriate corrugated iron, that are also in very bad shape.

Since the privatisation, the estate has initiated a social policy, introducing a group insurance scheme for the workers, contributing to the construction of class rooms and intending to rehabilitate a primary school in the near future. Currently, 23 permanent workers are under contract, as well as about 2.000 temporary workers during the busiest months, thus creating important job opportunities for the surrounding villages. The employment has actually increased with the production and the extension of the estate.

With 4.996 members, the coop KOBACYAMU, created in 1993, covers 16 tea sectors. The four top members met by the mission team declared that the road rehabilitated by the STABEX has a great impact, reducing the access time by two and ensuring timely and quality delivery of the green leaves to the plant, hence reducing losses. The road has also a socio-economic impact, like facilitated access to the health centre or the purchase and delivery of products.

The mission team also noticed a better awareness from the estate to the cooperative in terms of necessity to improve their negotiation capabilities. As an example, the coop has rearranged all its organisation and staff for better facing this new context.

SORWATHE Estate and discussion with ASSOPTHE coop members – 05.06.10

The SORWATHE tea plant has been privatised in 1975 and has 400 employees and 3 shareholders: one with 85% of the shares, the coop ASSOPTHE with 13% and the

Rwandan State with 2%. 262 ha belong to the plant, whilst the coop has 953 ha. The plant is able to produce 100 t green leaves on the best days.

Discussion with the manager of the coop, Mr Jean-Marie V.; Mr. Wellars A., chairman; Mr. Cyprien S., secretary of the Board of Directors and Mr. Onesphore K., task manager. The coop has currently some 4.500 members, including about 30 to 35% women. The members are located in 9 sectors in a radius of 30 km. The average plot per member covers 0,2 ha.

The drainage works have involved a large amount of manpower. In 2008, for example, 630 workers, distributed in 21 teams of 30 workers earning between 800 RWF and 900 RWF/day have been participating in the construction and rehabilitation of drainage canals. The total wages amounted to 6.161.200 RWF. In 2009, the amount of wages reached 15 MRWF, thus participating to the overall enrichment of the concerned population, constituted by both members and non-members of the coop. According to the manager, STABEX would pay more than the coop for the drainage, thus attracting many daily workers, sometimes even from other districts. At least 600 of such workers came in 2008 to the coop for looking for a job. Even if all of them couldn't be hired, the mission team estimates that the STABEX has had a significant impact on the poor through this specific project.

Thanks to the drainage, not only floods have been avoided, but the overall quality of the tea production has improved and some areas could be replanted on about 50 ha. 1 million trees, not yet in production, have also been replanted in 2009.

Despite the drainage, the production, however, has not really increased in 2009, due to dry weather conditions in the area. In addition, the coop has about 200 ha of low quality trees, producing 30% to 50% less than the best tea plants.

4.000 to 5.000 people are working on the tea plantations. They are distributed in about 20 associations, including 13 for the picking of the green leaves. Amongst those workers, about 40 to 50% are non-members of the coop, thus being the most important employer in the area. The contribution of the STABEX is highly estimated by the beneficiaries.

The coop has 62 permanent workers and a turnover of some 900 MRWF (i.e. an average of 173.000 RWF yearly revenue per member in 2009), including 780 MRWF earned from the green leaves sold to the SORWATHE and 120 MRWF from the coop's own gas stations, its 10 ha forests (the coop is selling wood to the SORWATHE) and its own tea plantation (29 ha), which has a sufficient production for paying the permanent staff. The coop also has two lorries and a van, which sometimes are rented for people outside the coop, as well as its own nursery.

The coop is also managing a savings and credit cooperative with currently 58 MRF. This helps supporting members looking for credits (a "minerval" for the secondary school could reach 100.000 RWF for a family, the manager said). In addition, being certified by FAIR TRADE, the coop each year receives money from this organisation, depending on the level of production, for investing in micro-financed projects for the poorest members of the coop or for free of charge schools ("écoles gardiennes"), water conveyances projects, etc.

If the coop wouldn't have got 13% in the SORWATHE, the members would have been ready to create their own plant, the manager said. The 2 billion RWF for this new plant would have had a return on investment of only 7 to 8 years, he added. The fact indeed demonstrates the power of the coop vis-à-vis the SORWATHE, especially when taking into account that the 262 ha of this tea production unit would probably not have been able to compensate the loss of the 953 ha of the coop. It is also interesting to mention

that the coop has its own quality analyst closely working with the SORWATHE, in order to ensure that the quality of the green leaves is well estimated.

STABEX financed the cooperative office (about 250 m²) of excellent quality and very cost effective, if we consider that only MFRW 13 have been invested. The building comprises three sections: the savings and credit cooperative section, a large meeting room, and the cooperative office.

In conclusion, with 4.500 members, close to 1.000 ha tea plantations, a turnover of 900 MRWF, a diversified portfolio of profitable activities ranging from tea production to gas stations and a significant social involvement, ASSOPTHE appears as an example of the strong structuration of the cooperatives in the tea sector.

Visit to COOPTHEGA in Nyabihu, and meeting with Mrs. Joyeuse U., manager of the cooperative – 10.06.10

The coop has been created in 2001 and has 154 members mostly living in the surroundings of the privatised Rwandan Mountain Tea factory, in the sectors of Karango, Rambora and Moringa. They also have some plantations more far away, in Cyamabuye (sector of Jenda). The total tea coop plantations cover only 30 ha, as compared to the 628 ha of the tea estate.

In 2008, the overall green leaves production of the coop has reached 130.453 kg (about 11.2 MRWF) and 141.193 kg in 2009 (12.142.598 at 86 RWF/kg).

The STABEX has financed construction and rehabilitation of drainage canals in 2007, 2008 and 2009, the rehabilitation of a rural road access and 19 barns (3 for the coop and 16 for the privatised Rwandan Mountain Tea plant).

The 13.5 km rural road is not achieved. Many erosion problems occurred during the construction, and landslides prevent from using the entire road; those problems result from poor assessment of the environment when this road was selected. Some Gabions should have been installed at the foot of the river curves to stop the erosion in time. Regarding the drainage the evaluation team has seen some inconsistencies between 2007 and 2009 with unexplained inflated unit costs per kilometre that have been multiplied by 5 or 6. (According to OCIR THE drainage can be done more than twice in the same area for different periods). Moreover invoices are duplicated for the same works.

The impact of the STABEX in terms of manpower is significant. As an example, the manpower used for the drainage works in Cyamabuye between October 2007 and August 2008 could be calculated by the mission team. 467 workers have been working 10.151 days for a total income of 9.078.180 RWF, thus increasing the purchasing power of the concerned population. It has, however, not been possible to verify if the same workers have benefited from more than one working contract.

Regarding the construction of 5 barns (collecting centres) in October 2007, 957 masons and 976 masons assistants have been employed at 1.500 RWF/day for the former and 750 RWF for the latter, thus representing a total income of 1.417.500 RWF.

In so far, the mission team may conclude that a clear impact of the STABEX on employment has been registered in the area, even if temporarily.

In terms of gender, women were largely involved in drainage works, whilst men were predominant for the construction of the barns. Concerning the drainage, a majority of workers were coming from the surroundings and even from outside the district as has already been noticed for other STABEX projects, thus showing the attraction of STABEX financing on the population.

Diversification Projects

Integrated Fish project / Kigali

This is an excellent innovative project which combines fish production or tilapia integrated with production of chicken and rabbits. The cooperative comprised 9 members and they employ 25 workers. The subsidy is 69.6 million and the coop contribution 39%. The production is made into in 2 large ponds of 3000m² and 19 small ponds, with 2 cycles of 6 months.

The pay back period is about 4 years

Goat rearing and cheese factory project / Kigali

The beneficiary has employed 4 staff. The project consists in a) purchase of an improved billy goat breeding, b) construction of 400 stables, d) distribution of 140 goats, e) technical support to plan the stables, f) contracts for maintenance and milk production, g) production and commercialization of cheese

The goats are distributed to poor population and the beneficiaries must redistribute again to other people after breeding.

The projection is to produce 10 to 15 cheeses per day during 250 days and sell them at 2500 RWF, which means RWF 9.375 million per year. The pay back with the cheese production and sales of billy goats is 7 years but may be reduced to 5 years.

Production of potatoes – Cooperative COTEMU Muhinzi / Gisenyi-Ruhengeri

The total cost of the project was about RWF 69 million, of which salaries RWF 8 million, equipments RWF 23 million, other and contingencies RWF 39 million. The cooperative which is the recipient was established in 2004 and comprises 372 members with about 500 hectares. They have been informed about the call for proposals through internet and formulated the project with the assistance of a consultant. The objective is to develop the production of quality seeds, and improve the capacity of producers. So far they have identified 13 hectares of which 7 ha have been planted, started the implementation of storage silos facilities that have been delayed, purchased the seeds through the ISAR, and trained 300 members.

In spite of being a good project in its concept, some weaknesses already appear: a) the implementation has been delayed, not only because of the enterprise but also because of lack of follow up from the coop, b) the management capacity should be reinforced, because the development plan is not sufficient to meet sustainability when the project will phase out. The evaluation mission has calculated the breakeven production to ensure acceptable returns and make the project viable at the end of STABEX support; they have to increase the area from 7 hectares to at least 13 hectares and increment gradually the production to 16 hectares within 7 years. In this scenario, the pay back period would be acceptable with some 5 to 6 years. But the need for mentoring is the basic condition to meet this target.

Promotion of modern bee-keeping and honey Plants around Nyungwe park, Cyamudongo / Butare

The total cost of the project was about RWF 93 million of which a subsidy of RWF 70 million, which means a contribution from the beneficiary of 25%. The contractual recipient is a private entrepreneur MIG which works with some 4000 producers (40 cooperatives) in 5 districts located in the area of Rulindo and Rwankuba. They have installed 8 apiaries and 200 hives (RWF 22 000 each), but the quality of works is quite questionable and in any cases not cost efficient. They also implemented 6 nurseries and they are finalizing the construction of collecting centres. The private entrepreneur has also improved its equipment and purchased centrifugal machine, filters and packaging. The beneficiaries estimate that they will increase the production per hive from 5-10 kilos before to 15-20 kilos with the new equipment. The model that is implemented seems to be replicable by local craftsmen. The community also produces candles from the wax which constitutes an additional income.

This project appears to be social oriented in its principle, since it contributes to develop opportunities for remote communities which have not many alternatives, and involves widows from the genocide. However it is also an economic investment for the recipient, and the risk of concentration to the private owner of the plant may not be discarded. Moreover the pay back period is critical and varies from 13 to 26 years according to the performance of the hives (15, 20 and 30 kilograms). That is why the evaluation team recommends improving the quality of hives and apiaries, instead of investing more at the private plant.

IKAMBERE Dairy / Nyanza

This project has not been implemented since the cooperative chairman diverted the funds for his own business and in jail.

Soja Project / Nyanza - cooperative ABAHUJE (Soy) in Rohango – 03.06.10

Three production coops (ABIYUNZE, UATA and IMPAKOMU) are working together with one soy transformation coop (ABAHUJE) having 14 members (9 women & 5 men).

ABIYUNZE: 60 ha land; 650 members (385 women), including about 80 (12.3%) producers of soy on 4 ha. Have sold 2.5 tons soy to ABAHUJE in 2009. In 2010, the soy area has been increased to only 6 ha, but the members of the coop expect 100 kg/producer, which would mean about 8 t production this year.

UATA: 72 ha land; 776 members (420 women), including about 60 (7.7%) producers of soy on 2 ha. Have provided 1.3 tons soy to ABAHUJE in 2009. In 2010, the number of producers has increased by 75%, from 60 to 105. The 22 kg in average/member produced in 2009 could easily be augmented now the market exists, the members said.

IMPAKOMU: 200 members (140 women), amongst whom about 100 (50%) are producing soy. The coop has cultivated 5.5 ha in 2009, from September to December, and supplied 2.5 tons sorted soy at 300 RWF to ABAHUJE.

Each member has produced an average of 25 kg, but it should be possible to reach 75 kg, because the members know now that the market is assured. As a matter of fact, the number of producers has already risen from about 100 in 2009 to 150 (+ 50%) in 2010 and the cultivated area has more than doubled (from 5.5 ha to 12.5). With a strong increase in productivity a realistic amount of 1.5 t/ha could be produced in a few years time, thus reaching 18t instead of the 2.5 of last year.

As can be seen from the data presented, there are significant differences from one production coop to another in percentage of producers, number of cultivated hectares and productivity/ha. In this context IMPAKOMU, benefiting from a marsh, is best placed, as soy needs much water. In so far, IMPAKOMU is producing soy during 3 seasons a year. The other coops, located on slopes, have more difficulties for getting enough water and are only producing during 2 seasons a year (September to December & from mid-January to mid-May).

All are interested in producing soy during the rainy seasons, as opportunities for this profitable product seem assured. As soon as the dry season is coming back, UATA and ABIYUNZE are producing vegetables, instead of soy.

Economic change begins to occur. Members can now pay their health insurance, school fees, and the nutrition of children is improving. It is also more complicated to make money with vegetables, the members said, because most of them are difficult to store for more than a few days.

Profits have been reinvested in the purchase of small animals (at least 50 members have bought goats), in clothing and in home improvement. Some members hope next year to buy a cow. All are members of a micro-credit and saving organization in a variable portion of their incomes.

When asking why, if soy is so profitable, UATA only counts only 105 producers in 2010 amongst 776 members, the answer was that the first year (2009) the peasants were quite reluctant to invest in this new production. Now they have seen the success of it, their number has already increased by 75% and this would only be the beginning, the limit being water constraints and availability of land.

ABAHUJE, the transformation coop, has transformed 9.3 t soy in 2009, i.e. the total of 6.3 tons produced by the 3 mentioned coops, added to 3 t. soy bought outside at 250 to 300 RWF/kg (due to presence of impurities).

With the soy, the transformation unit produces Tofu (“soy steak”), oilcake (“Okara”) for cattle and soy milk.

1 kg soy produces 1 kg tofu at 1.000 RWF and 4 kg oilcake. With a total production cost of tofu at 643 RWF/kg, the margin reaches 357 RWF/kg, i.e. 3.320.000 RWF ((Milk and oilcake not included) for the 9.3 t. transformed in 2009.

To retain its producers and attract new ones, ABAHUJE has developed some incentives: inputs and fertilizers given to the producers and reimbursed when they sell their production to the transformation coop; advance payments in case of need; members of the production coops buy tofu at 800 RWF/kg instead of 1.000 RWF...

The production is mostly sold in the area, due to conservation reasons (shops, supermarkets, etc.) and has a great success.

ABAHUJE is still waiting for the new equipment financed by STABEX and ordered in Belgium. It should arrive in summer, they said.

In conclusion: the system is well organized and obviously the management knows where it wants to go and how to progress. The fact ABAHUJE has hired an external technician, specialist of soy transformation, is definitely an asset. The main constraint is to solve some conservation problems, in order to be able to extend the distribution area.

Vegetables and Mushrooms project / Kigali

This project started conventionally but the cooperative chairman and the board members diverted the funds for their own interest and are in jail.

Visit of 07.06.10 Cooperative ISATA BIO MACADAMIA – Kibuye

signature of Contract: 11.02.2009 – End : 11.08.2010

Coop : 25 members, 17 men, 8 women.

Met Mr. Célestin N., agronomist –
Mr B. Ignace, Chairman –

The coop begun macadamia production with this project in 2009 and is now the second macadamia nursery in the country. The mission team has noticed the existence of many macadamia trees in the area, which suggests

Macadamia nuts are planted 4 months in sand (phase 1). The small macadamia trees are afterwards planted in bags and protected from the sun for 3 months (phase 2), then 3 months in the sun (phase 3) before being used as wilding plant (sauvageon). Graft plants are bought to ISAR (tetrafilia & integrifolia) and after grafting the plant needs 4 more months (phase 4) before to be finally sold. In total, all the production process of one tree takes 14 to 15 months and even 18 in case of rejection of the rafting, which imposes to restart the process at phase 3.

The coop has produced 11.700 macadamia bio trees since the beginning of the project in February 2009. The trees are sold 1.500 RWF each, thus meaning a total of 17.555.000 RW. Total annual costs: 6 MRWF according to the Chairman. The coop would have about 100 clients and is selling not only to its members but also in all the area. The coop is somehow in competition with RADA, which is providing small macadamia trees for free, but has an added value in the fact that the coop is producing bio trees for bio final products with higher market prices: 1kg usual macadamia is sold between 16 & 19 USD, against 28 to 30 USD for 1 kg bio macadamia (+ 70%).

At the current stage, the nursery has been facing a problem of rejection of about 4.000 of the graft plants, due to mushrooms, but they will introduce some tests for solving the problem.

One tree usually starts producing about 5 kg after 5 years (even 3 years only in the region of Kibuyé, due to soil and climate) and can progressively reach more than 100 kg a year (with some exceptions at 200 and more). Contrary to coffee trees, the macadamia trees have not to be replaced, as they can live largely over a 100 years.

One of the problems, however, is to convince people to invest in something now for first incomes in only 3 to 5 years.

The nursery is hiring up to 50 seasonal during the dry season and about 12 during the wheat season. Each one is paid 1.000 RWF/day.

The chairman estimates that after the 5th year, a producer with 200 trees (1 ha), should earn/ kg about 3.000 USD/year and about 4.000 the 7th year/kg. After 12 years, the production should be around 3.200 to 4.000 kg/ha, meaning around 13 to 15.000 USD/ha according to quality and market conditions.

The market is estimate at around 10% for internal consumption and 90% for export. The coop is looking for bio certification as from next year (AB or ECOCERT). The chairman would already benefit from some good contacts with the BIOCOOP network in the EU, and would pass through this network for selling the bio macadamia in Europe, representing the most important market for this product.

Sericulture project / Kibuye - Cooperative KARONGI SERICULTURE - 08.06.10

Meeting with Mrs. Jane A, sericulture technician -; Mr. Théonesse M., technician of the lab (coop ASDEFI); Mr. Vianey B, Chairman of coop Karongi –

60 members in the coop: 40 men and 20 women. Previously dispersed, they were already working in the same sector.

The coop has currently received 54.7 MRWF on a total of 61.6 MRWF, including 37.04 MRWF for HR (salaries, per diem, conferences). Training represents 8 MRWF.

The coop is producing for the company UTEXRWA, located in Kigali, which buys their cocoons (1kg cocoons = 1.900 RWF). As the coop doesn't have sufficient mulberry trees at its disposal, it is collaborating with 5 other coops, as well as a lab providing Bombix eggs.

They are currently constructing a new rearing house on own funds for being able to produce about 500 to 600 kg cocoons per year from those eggs, once in full production (1.2 MRWF/year). They would have already spent 38 MRWF till now as contribution, including 11 MRWF for the current rearing house under construction.

At this stage, the coop has only produced and sold 2 t cocoons, but the aim would be to sell cocoons, eggs and final silk products.

They have benefitted from training sessions organised by MINAGRI, explaining how to produce and to make the business profitable. The coop ASDEFI in which Mr. M. A is working, is hoping for a turnover of 22 MRWF/year. They don't need any support staff, as they have been trained for the job, he said.

The chairman of Karongi Sericulture said the coop would need capacity building in management. He has an accountant and a general manger for this project, located in Kigali. When asking why for an office in Kigali, so far away from the coop, the answer was unclear. It is not excluded that other activities are developed in the capital, with the office, computer and consumables paid by STABEX. This point should be verified.

The mission team noticed that the budget proposed by the project was unclear and should have been amended, before acceptance of the contract. For example, when asking why 650.000 RWF have been financed by STABEX in per diem for training of local people for 4 days, the chairman answered that in fact the amount has covered all the training costs, including 4 sessions of 3 days and not only 4 days. This statement could not be verified.

The overall impression is that the management of this project financed by STABEX has no clear idea about the effective operational costs and the exact turnover. The mission team concluded that the management should be much closer to the project, instead of Kigali, and to take it more seriously.

It would be recommended to soon realize an audit of this project.

Essential Oils project SORANA (Société Rwandaise des Arômes naturels)/Ruhengeri

The beneficiary of this project is a private enterprise of 5 persons, of which Mr A Jean Marie, who learned the technology in Belgium and runs the project. He came back in Rwanda to implement the project. The activities really started with STABEX, although some investments like the building were completed before.

The total cost of the revised budget is MRWF 93, of which MRWF 57 as EU subsidy, which means 39% of beneficiary contribution.

Plant Equipments	28
Vehicle	15
Training farmers	8
Staff	17.3
Office equipments	7
Operating costs	5
Administration	12.7

The scheme consists in processing flowers (mainly roses and jasmine) that are produced at farm level, as terrace protection plants, with a target of about 120 farmers, who are even supposed to make the rose cuttings. The project is ambitious, the processing plant is well realized but in spite of efforts to deliver the necessary training farmers have not yet integrated the technology, plant protection and pruning. Due to the difficulty to get enough material through plant cutting, they decided to negotiate with a private company (not the ISAR) to produce 28 000 vitro-plants during 2 years; each vitro-plant plant will give ten times more plants. The unit cost is estimated at 200 RWF.

With 10 000 cuttings, about one hectare, it is possible get 5 MT of fresh flowers, and at the end 0.75 kg of essential oil.

Mr A Jean Marie already negotiated with BIOLAND in Bordeaux which is a reseller to perfume companies of Grasse. The arrangement would allow to get 2 500 USD per kilo of essential oil.

He also made a financial simulation with a 3 cycle production and a regular evolution to meet 300 MT. whilst this projection is very ambitious, this project is very profitable and can be adjusted according to the production capacity at farm level, where strategies have to be developed according to the interest of the producers.

The next tables show the very high profitability of the project good IRR and pay back period within 3 years:

ANNEX 4. List of stakeholders and persons consulted

Institution	Personne de contact	Fonction
CAON	KARASIRA Sylvie	Minecofin
DUE	DEKENS Jean-Pierre	Chef de la Section Economie rurale, Sécurité alimentaire, Décentralisation et Environnement (250) 02585738 + 39 + 40 + 41
	LEDROIT Pascal	Responsable STABEX - Section Economie rurale, Sécurité alimentaire, Décentralisation et Environnement (250) 02585738 + 39 + 40 + 41
	MUKANKUSI Séraphine	Section Economie rurale, Sécurité alimentaire, Décentralisation et Environnement (250) 02585738 + 39 + 40 + 41
OCIR CAFE	KANYANKOLE Alex	DG OCIR CAFE
	MUNYANKERA Pontien	Regisseur DP / Chef de Service planification OCIR CAFE
	MURAGIJIMANA Esperance	Comptable engagé pour le DP
	INGABIRE Clémentine	Responsable coopératives OCIR Café
	LIBERAKURORA Eugène	Responsable stations OCIR Café
ISAR	BUGINGO Eric	Comptable DP
	MUNGANYINKA Esperance	Regisseur DP/ Chercheur ISAR
OCIR THÉ	BUTERA Antoni	DG OCIR THÉ
	NTAKIRUTIMANA Corneille	Régisseur DP/ Chef de Service planification OCIR THÉ
	BISENGIMANA Jonathan	Directeur Administratif et Financier / Comptable du DP
	MBA François	Suivi des chantiers pistes théicoles
	KAPITALI Tharcisse	Suppléant comptable OCIR Thé
RHODA Pyrèthre	NZARABA Magnifique	DG RHODA
	SHEMA Aimable	Coordinateur du DP
	TWIZERE Jean de Dieu	Comptable DP/ Cellule Stabex
MINAGRI Projets	SIRIKARI Christophe	Comptable DP/ CAON
	BYANDAGARA Damien	Directeur Planning MINAGRI/Regisseur
	RUSINGIZANDEKWE Aimable	Chargé du S&E des projets
RADA Terrasses	RUHIGANA Venuste	Regisseur DP/ RADA
	HAKUZIMANA Innocent	Coordinateur du DP
	NTIYAMIRA Faustin	Regisseur du DP/ Agronome GASABO
	KABERA Jean Damascène	Comptable DP/ DAF KARONGI
	MUHAYIMANA Nelson	Regisseur du DP/ Agronome NYARUGURU
	NIYITEGEKA Jean Baptiste	Regisseur du DP/ Agronome RULINDO
	MUSANA Pacifique	Comptable du DP/ DAF NYABIHU
NKEZABERA Come	Regisseur du DP/ Agronome BURERA	
Autres	GRANDJEAN Luc	Evaluator of the STABEX radical terraces; 078 377 4532 – office@experts-sud.com
	MBANGUKIRA Savio	Worker at Buffcoffee - Remera
	MUKARUSINE Véronique	Worker at Buffcoffee - Remera
	MUKAMDAYISEMGU Pélagine	Worker at Buffcoffee - Remera
	DUSEMGIWAMA Francine	Worker at Buffcoffee - Remera
	MUKAMANA Judith	Worker at Buffcoffee - Remera
	NTABANGANYWANA Zeburiya	Worker at Buffcoffee - Remera

NKURANYABIZI Aloys	Vice-chairman of the coop ABURWAGASABO (0782 108 467)
NDAYAMBAJE Frédéric	coffee producer, coop INYONGERAMUSARURO (0788 763 863)
MUGENERWA Xavier	Supervisory Board member, coop INYONGERAMUSARURO (0788 860 532)
AHIMANA Emmanuel	Member of the Board of Directors, coop INYONGERAMUSARURO (0788 743 486)
RULIENANKERO Faustin	Animator, coop INYONGERAMUSARURO (0785 687 640)
RUKUSAGARA Laurent	Animator, coop INYONGERAMUSARURO (0788 680 047)
NIYONZIMA Diogène	Provincial Supervisor of OCIR Café (0788 872 348)
RWABAHIZI Théophile	T.S Coffee District Rulindo (0788 622 029)
HATEGEKIMANA Jean	Coop chairman at NYAMUENDA
MUTUNSE Deo	WS manager at NYAMUENDA
VIANNEY Jean-Marie	Manager of coop ASSOPTHE (0788 300 437)
ABANDISINJYE Wellars	Chairman of coop ASSOPTHE (0788 744 596)
SEBURIRI Cyprien	Secretary of the Board of Directors of coop ASSOPTHE (0788 224 328)
KARANGWA Onesphore	Task manager at coop ASSOPTHE (0788 897 135)
UWERA Joyeuse	Manager of the cooperative COOPTHEGA
HABAKURAMA Emmanuel	Chairman of the pyrethrum cooperative INYANGE ZA MUDENDE (0788 740 493)
BIZIMUNGU Gabriel	Director General of SOPYRWA (0788 229 181)
NZIMBIRINDA Célestin	Vice-chairman of coop COPROCAGI (0783 360 735)
KANANI Marc	Secretary of the Supervisory Board of coop COPROCAGI
MUSEMAKWELI Phinéas	Coffee processing OCIR CAFÉ (0788 303 708)
NDAYIZIGIYE Eugène	Manager of coop COPROCAGI – OCIR CAFÉ (0788 592 519)
MUTABAZI Jean	KITABI TEA Cy. Ltd. (0788 304 640)
NKURUNZIZA Vénuste	Chairman of the Supervisory Board of coop KOBACYAMU (0788 730 287)
NSABIMANA Pascal	Chairman of the Board of coop KOBACYAMU (0788 768 520)
HABIMANA Faustin	Member of the Board of coop KOBACYAMU (0788 636 903)
UWAMUGURA François	Accountant of coop KOBACYAMU (0788 486 404)
DUTEZIMBEREKANA Providence	Accountant – WS Nyamure (0788 799 252)
BYIYINGOMA Jean Damascène	Vice-chairman – WS Nyamure (0785 556 880)
BARIYANGA Bernard	Executive Secretary of Rwanda Coffee Cooperative Federation (0788 510 472)
HABIYAMBERE Maurice	GIS Coffee (0788 405 963)
NSABIYUMVA Célestin	Agronomist at coop ISATA BIO MACADAMIA (0788 738 369)
BEZAHO Ignace	Chairman of coop ISATA BIO MACADAMIA (0788 312 928)
NDAGIJIMANA Nicolas	Owner of WS KIBUYE MOUTAIN COFFEE (0788 757 298)
HATUNGURAMYE Ananias	Nurseryman (0783 203 791)
ATUHWERA Jane	Sericulture technician (0785 737 671)
MUSABYIMANA Théodose	Sericulture labo technician – coop ASDEFI (0788 353 290)

	MUKAMUGEMANA Speranuya	Pyrethrum farmer Gizesi/Kanunga/Karongi
	TWAGIRAMUNGU Mathias	Agronomist (0788 459 876)
	NDAGIJIMAN Eugène	Chairman of coop KOTVI (0788 58 85 49)
	BIZIMUNGU Gabriel	General Manager SOPYRWA (0788 229 181)
	RUGUNJAWA John	Field Officer north Zone (0788 448 722)

ANNEX 5. List of Documentation consulted

- Programme Indicatif National et Document Stratégique Pays 10ème FED de Coopération entre la Commission Européenne et le Rwanda
- COM STABEX Rwanda 90-96 et son avenant N°1
- Devis programmes et protocoles d'accord des différentes composantes
- Rapports Semestriels de l'Assistance Technique Stabex 1 à 11 (2004 à 2008)
- Rapport Annuel Stabex 2005, 2006, 2007, 2008
- Stratégie d'utilisation des fonds Stabex Juillet 2007
- Mission d'Evaluation Programme Stabex - AIDCO (2006, 2007)
- Rapport d'exécution technique des activités Assistance Technique Stabex 2003 - 2006
- Analyse Economique et Financière de la Filière Café – BDPA (2005)
- Rapport Final de la cellule de coordination de l'Assistance Technique Stabex (31/05/2009)
- Minutes des réunions techniques des comités de suivi des différentes composantes
- rapport d'évaluation et d'analyse Ecofin du programme de terrasses radicales (en cours)
- Sector Policy for the Agriculture Transformation (SPAT 2)
- Rapport d'Audit Financier Stabex – AUGECO (2000 - 2002)
- Rapport d'Audit Financier Stabex – AUGECO (2003 - 2006)
- Rapport d'Audit DP2 Café et DP1 ISAR – AUGECO (2007)
- Rapport d'Audit DP1 CAFE, DP1 Thé, Protocole Pyrèthre – KPS (2005)
- Rapport d'Audit DP3 Café et DP2 THE – AUGECO (2008)
- Rapport d'Audit DP2 ISAR – DELOIT & TOUCH (2008)
- Rapport d'Audit DP4 Café, DP3 ISAR, DP3 THE, DP1 RHODA, DP1 RADA – AUGECO (2009)
- Etude de faisabilité de la relance de la filière café (2002)
- Mission d'expertise en drainage – Rapport final – BDPA (Février 2006)
- Plant Breeding and Related Biotechnology Capacity – Rapport GIPB et Global Crop Diversity Trust – Octobre 2007
- Smallholder Cash and Export Crops Development Project (PDCRE) – Aide-mémoire – IFAD
- Evaluation de l'impact du projet de développement des cultures de rente et d'exportation (PDCRE) – Période du 01.01.2004 au 31.12.2009 – Rapport final, avril 2010 – Cabinet CIBLE Sarl.
- PSTA/EDPRS Programme
- Projet Stabex : OCIR Café OCIR CAFÉ - Rapport de synthèse des activités réalisées dans le cadre de la promotion des coopératives caféicoles - Période : novembre 2008 - septembre 2009 - Clémentine Ingabire, chargée de la promotion des coopératives caféicoles - 30/09/2009

ANNEX 6. Logical Frameworks

Synthèse Cadres logiques des DP 3, DP 4 et DP 5 CAFE

NIVEAUX	LOGIQUE D'INTERVENTION	INDICATEURS OBJECTIVEMENT VERIFIABLES DP3	INDICATEURS OBJECTIVEMENT VERIFIABLES DP4	INDICATEURS OBJECTIVEMENT VERIFIABLES DP5
OBJECTIF GLOBAL	Accroître le revenu des caféiculteurs. Lutter contre la pauvreté.	- Augmentation du pouvoir d'achat des producteurs de café - Augmentation de la masse monétaire générée par la caféiculture	- Augmentation du pouvoir d'achat des producteurs de café - Augmentation de la masse monétaire générée par la caféiculture	-Augmentation du pouvoir d'achat des producteurs de café - Augmentation de la masse monétaire générée par la caféiculture
OBJECTIFS SPECIFIQUES	Améliorer la productivité du verger caféier	- Augmentation de la quantité de café parche produite par arbre, par unité de surface ou par exploitation	- Augmentation de la quantité de café parche produite par arbre, par unité de surface ou par exploitation	- Augmentation de la quantité de café parche produite par arbre, par unité de surface ou par exploitation
	Améliorer la productivité du travail en caféiculture	- Amélioration de la valorisation de la journée de travail	- Amélioration de la valorisation de la journée de travail	- Amélioration de la valorisation de la journée de travail
	Améliorer la qualité du café marchand	- Augmentation de la quantité de café « fully washed » - Augmentation de la quantité de café « washed » bénéficiant d'une surcôte	- Augmentation de la quantité de café « fully washed » - Augmentation de la quantité de café « washed » bénéficiant d'une surcôte	- Augmentation de la quantité de café « fully washed » - Augmentation de la quantité de café « washed » bénéficiant d'une surcôte

RESULTATS				
	1. Appui à la production	<ul style="list-style-type: none"> - Nombre d'associations et de planteurs appuyés par le projet - Types et quantités d'intrants mis à disposition des producteurs de café - Quantités d'intrants consommées par les producteurs de café - 1 150 ha régénérées par recépage et entretenus - 15 000 pépinières établies et 15 millions de plants produits en 2006 - 20 000 pépinières établies et 20 millions de plants produits en 2007 - 17 500 ha de nouvelles plantations installées, dont 100 ha après arrachage de vieux caféiers - Nombre de formations réalisées (producteurs et techniciens agricoles) 	<p>1.1 Production de matériel végétal</p> <ul style="list-style-type: none"> ▪ Achat semences pour herbes de pailis ▪ Achat semences café multipliées par les caféiculteurs ▪ Conduite des pépinières ▪ Suivi des pépinières <p>1.2 Intensification de la production</p> <ul style="list-style-type: none"> - Analyse des sols caféiers - Suivi évaluation campagne café - Mise en place système de suivi/évaluation <p>Suivi OCIR</p> <ul style="list-style-type: none"> - Lutte contre la punaise du caféier <ul style="list-style-type: none"> - Achat d'insecticide - Fongicides - Organisation des campagnes de traitement 	<ul style="list-style-type: none"> - Nombre de coopératives et de planteurs appuyés par le projet - Types et quantités d'intrants mis à disposition des producteurs de café - Quantités d'intrants consommées par les producteurs de café - 65 pépinières établies et 2 millions de plants produits en 2008 - 800 ha de nouvelles plantations installées - 60 ha d'herbes à pailis plantées - Nombre de caféiers plantés en plantations consolidées bien entretenus - Nombre de formations réalisées (producteurs et techniciens agricoles)

	<p>2. Appui aux associations</p>	<ul style="list-style-type: none"> - 40 associations appuyées par le projet - 200 responsables formés - 37 magasins-bureau installés - 200 animateurs planteurs formés et équipés - Nombre de planteurs suivis par le projet - 10 stations de lavage installées - 10 associations formées en gestion d'une station de lavage 	<p><u>2.1 Renforcement des capacités d'organisation et de gestion des coopératives.</u></p> <ul style="list-style-type: none"> - Indemnités des animateurs planteurs - Salaire chargé de la promotion des coopératives - Formation des responsables des coopératives sur les thèmes de la gestion financière, de l'organisation et de la bonne gouvernance, de l'élaboration de plans stratégiques, etc ... - Appui à la gestion financière - Formation de cadres de l'OCIR Café (logiciel). <p><u>2.2 Renforcement des capacités de traitement post-récolte des coopératives.</u></p> <ul style="list-style-type: none"> - Construction et équipements de 4 stations de lavage - Contrôle et surveillance des chantiers (4 SDL) - Etude pour 2 stations de lavage - Travaux complémentaires non exécutés SDL - Construction et équipements de 10 magasins bureaux. - Achat 10 groupes électrogènes - Financement d'infrastructures ou d'aménagement complémentaires pour les coopératives <ul style="list-style-type: none"> ▪ Fourniture d'équipements de laboratoire de contrôle de la qualité ▪ Fourniture de chaînes de dépulpage ▪ Fournitures de pompes à eau - Fournitures de matériel de séchage - Etude d'adduction d'eau - Installation système GIS OCIR CAFE - Recensement café 	<ul style="list-style-type: none"> - 40 coopératives appuyées par le projet - 200 responsables formés - 287 animateurs planteurs formés - Nombre de planteurs suivis par le projet - 5 stations de lavage installées - 5 coopératives appuyées en gestion financière
	<p>3. Appui à la commercialisation</p>	<ul style="list-style-type: none"> - 335 millions disponibles à la BRD pour la commercialisation du café parche ou cerise. - Participation de 15 responsables d'associations à des foires internationales 	<p><u>Renforcement capacités marketing</u></p> <ul style="list-style-type: none"> • Participation foires et expositions • Participation au Cup of Excellence • Consultance marketing à l'extérieur • Communication 	<ul style="list-style-type: none"> - Participation de 10 responsables des coopératives à des foires internationales

Synthèse Cadres logiques des DP 1, 2, 3, 4 THE

LOGIQUE D'INTERVENTION	INDICATEURS OBJECTIVEMENT VERIFIABLES DES DP 1, 2, 3 & 4
<p>1 - OBJECTIFS GLOBAUX</p> <ul style="list-style-type: none"> - Appuyer la politique du gouvernement de relance et développement de la filière thé. - Accroître les revenus des théiculteurs - Lutter contre la pauvreté - Accroître les rentrées de devises générées par l'exportation du thé. 	<ul style="list-style-type: none"> - Augmentation du pouvoir d'achat des théiculteurs - Augmentation du prix de vente par kg de feuilles vertes - Augmentation des rentrées de devises générées par l'exportation du thé.
<p>2 - OBJECTIF SPECIFIQUE</p> <p>Participer à la réhabilitation de la filière thé pour permettre un passage vers une production privatisée dans de bonnes conditions.</p>	<ul style="list-style-type: none"> - Augmentation de la production de thé. - Augmentation des surfaces de thé cultivées - Augmentation de la production de thé par ha. - Augmentation du prix de vente par kilo des feuilles vertes - Augmentation du prix de vente par kilo du thé noir exporté -

Synthèse Cadres logiques des DP 1, 2 PYRETHRE

LOGIQUE D'INTERVENTION	INDICATEURS OBJECTIVEMENT VÉRIFIABLES DP1	INDICATEURS OBJECTIVEMENT VERIFIABLES (POUR OG/OS) ET RESULTATS DP2	INDICATEURS OBJECTIVEMENT VERIFIABLES POUR RESULTATS DP2
1 - Objectifs globaux - Lutter contre la pauvreté en accroissant les revenus des pyréthriculteurs - Appuyer la politique du gouvernement de relance et développement de la filière pyréthre	- Augmentation du pouvoir d'achat des producteurs de pyréthre - Augmentation de la masse monétaire générée par la pyréthriculture - Augmentation du prix de vente par kg de fleurs sèches	- Augmentation du pouvoir d'achat des producteurs de pyréthre - Augmentation de la masse monétaire générée par la pyréthriculture - Augmentation du prix de vente par kg de fleurs sèches	
2 - Objectif spécifique - Augmenter la quantité et la qualité de la production de pyréthre dans les régions de Byumba, Gisenyi et Kibuye.	- Augmentation de la production de pyréthre dans les régions de Byumba, Gisenyi et Kibuye. - Augmentation des surfaces de pyréthre cultivées (150 Ha) - Augmentation de la production de pyréthre par ha. - Augmentation de la quantité de pyréthrine extraite par kg de fleurs sèches - Augmentation du prix d'achat / kg du pyréthre	- Augmentation de la production de pyréthre dans les régions de Byumba, Gisenyi et Kibuye. - Augmentation des surfaces de pyréthre cultivées (110Ha) - Augmentation de la production de pyréthre par ha. - Augmentation de la quantité de pyréthrine extraite par kg de fleurs sèches - Augmentation du prix d'achat / kg du pyréthre	
3 – Résultats 1. Mise à disposition de souches pour 150 ha 2. Nouvelles plantations réalisées sur 150 ha par les pyréthriculteurs bénéficiaires des semences (souches) 3. Augmentation globale de 225 tonnes de production de feuilles fraîches des pyréthriculteurs bénéficiaires des souches 4. Installation de 5 500 nouveaux séchoirs solaires pour 5 500 pyréthriculteurs 5. Construction de 12 hangars	- Quantité de semences distribuées. - Nombre de bénéficiaires - Nombre ha de nouvelles plantations réalisées par les pyréthriculteurs bénéficiaires - Augmentation globale de la production des pyréthriculteurs bénéficiaires Nombre de nouveaux séchoirs installés. Nombre de nouveaux hangars	3 – Résultats 1. Mise à disposition de souches pour 110 ha 2. Nouvelles plantations réalisées sur 110 ha par les pyréthriculteurs bénéficiaires des semences (souches) 3. Augmentation globale de 165 tonnes de production de feuilles fraîches des pyréthriculteurs bénéficiaires des souches 4. Installation de 100 nouveaux séchoirs solaires 5. Construction de 16 hangars de collecte et 4 hangars de stockage centrale de fleurs sèches pour assurer le maintien de leur qualité jusqu'à la transformation 6. Augmentation globale de 33	- Quantité de semences distribuées. - Nombre de bénéficiaires - Nombre ha de nouvelles plantations réalisées par les pyréthriculteurs bénéficiaires - Augmentation globale de la production des pyréthriculteurs bénéficiaires Nombre de nouveaux séchoirs installés. Nombre de nouveaux hangars construits

LOGIQUE D'INTERVENTION	INDICATEURS OBJECTIVEMENT VÉRIFIABLES DP1	INDICATEURS OBJECTIVEMENT VERIFIABLES (POUR OG/OS) ET RESULTATS DP2	INDICATEURS OBJECTIVEMENT VERIFIABLES POUR RESULTATS DP2
<p>de collecte et 2 hangars de stockage centrale de fleurs sèches pour assurer le maintien de leur qualité jusqu'à la transformation</p> <p>6. Augmentation globale de 45 tonnes de la production de feuilles sèches des pyréthriculteurs bénéficiaires</p> <p>7. Un total de 120 pyréthriculteurs formés à la culture et au séchage du pyrèthre</p>	<p>construits.</p>	<p>tonnes de la production de feuilles sèches des pyréthriculteurs bénéficiaires</p> <p>7. Un total de 160pyréthriculteurs formés à la culture et au séchage du pyrèthre</p>	

ANNEX 7. Coffee Physical Achievements

PROVINCE	DISTRICT	SECTOR	Name of WS	Private	Cooperative	New WS	Equipment	Storage	Coop members
EASTERN PROVINCE	BUGESERA	SHYARA	Ngenda	1			1		376
	GATSIBO	REMERA	ENAS/Gatsibo	1			1		390
	KIREHE	MPANGA	ENAS/Nyarubuye	1			1		0
		SAKE	Sake Plantation	1			1		516
	RWAMAGANA	KARENJE	NYAMATETE/Coffee C,		1		1		85
		KARENJE	KOPAKABI		1		1		1197
		FUMBWE	Mununu		1	1			432
	S/Total Eastern Province			4	3	1	6	0	2996
KIGALI CITY	GASABO	NDERA	ENAS Ndera	1			1		579
	KICUKIRO	MASAKA	Seven Lakes/Masaka	1			1		290
		S/Total Kigali city		2	0	0	2	0	869
NORTHERN PROV.	GAKENKE	MATABA	Bukonya coffee	1			1		315
		MUYONGWE	SDL Muyongwe Tuzamurekawa	1					83
	RULINDO	BUREGA	CAFERWA/Kisigiro	1					325
			SDL Rulindo		1	1			400
		GITI	ENAS/Rwamiko	1			1		381
	S/Total Northern Province			4	1	1	2	0	1504
Western Province	KARONGI	MUBUGA	Kibuye M.C	1			1		708
	NYAMASHEKE	KIRIMBI	COVACAF/Kivugiza	1			1		100
		GIHOMBO	Gihombo/Gatsinga	1			1		70
		MACUBA	Mwasa	1			1		40
		SHANGI	Sicaf/Mwito	1			1		700
		KARAMBI	GATARE COFFEE	1			1		623
		KAGANO	NGOMA CWS	1			1		250
		KANJONGO	Sicaf/Kirambo	1			1		500
	RUBAVU	NYAMYUMBA	COOPAC Nyamwenda		1		1		2210
		RWIMBOGO	INKINGI/Rusizi		1		1		180
		NYAKARENZO	CNMC MUNYURA	1			1		830
		NZAHANA	COCAGI		1		1		1200
		GITAMBI	COOPROFICAG Gitambi		1		1		8
	RUSIZI	NYAKABUYE	COTECACYA		1		1		17
		MUSHONYI	CAFERWA/Nkora	1			1		1221
		BONEZA	KINUNU COFFEE	1			1		1500
	RUTSIRO	KIGEYO	INGOBOKA		1		1		138
NGORORERO	HINDIRO	HORIZON COFFEE	1			1		1403	
	S/Total Western Province			12	6	0	18	0	11698
Southern	GISAGARA	NYANZA	COOPROCAGI/STABEX		1	1			300

Province									
	HUYE	MARABA	ABAHUZAMUGAMBI II		1		1	1	1779
	KAMONYI	KAYUMBU	KAYCO/Kayenzi	1			1		626
		RUKOMO	UCAR		1		1		132
		MUGINA	Kiyonza/COFFII	1			1		715
		GACURAMBWENGE	SHENGA/Rukundo	1			1		733
	MUHANGA	CYEZA	CPCDKA/Muhanga	1			1		574
	NYAMAGABE	MBAZI	BUFCOFFEE/Remera	1			1	1	1714
	NYANZA	NTYAZO	Dutezimbere kawa/ Nyamure(COPEDUKANYA)		1	1			805
	RUHANGO	BYIMANA	RUHANGO/STABEX		1	1			561
S/Total Southern Province				5	5	3	7	2	7939
Grand Total				27	15	5	35	2	25006
				42			42		

Beneficiaries of offices and Storages other than WS

PROVINCES	DISTRICTS	BENEFICIAIRES	COOP	PRIVE	MEMBRES/ COOPERATIVE
Nord	Rulindo	INYONGERAMUSARURO	1		400
Est	Rwamagana	ABURWAGASABO Gasabo	1		432
Est	NGOMA	COOCAFE Mirenge	1		563
Nord	Rulindo	TERIMBERE KAWA YACU Shyorongi	1		1215
Est	Ngoma	ABATIGANDA Rukira	1		465
Sud	Nyamagabe	Bufcoffee Remera		1	1714
	Maraba	Abahuzamugambi (Maraba II)	1		1779
			6	1	6568

Rehabilitated CDM

Province	District	Coopérative ou Associations	CDM et hangars réhabilités
Nord	Rulindo	Inyongeramusaruro	8
	Gakenke	Abakundakawa	8
		Ikawa yacu (Bugarura)	6
	Kinihira	IAKT	5
	Kisaro	Acaki	4
Sud	Kamonyi	KOABAKA Intarushwa (ex Ishyakamu)	5
	Muhanga	Kobakamu	7
	Ruhango	Arabica	7
		COCARU-Abishyizehamwe	6
Ouest	Karongi	Abishyizehamwe	6
	Nyamasheke	Iakaga	3
		Ishyabakanya	4
	Rusizi	Tuzamurane	6
EST	Rwamagana	Aburwagasabo	5
Total			80

ANNEX 8. Tea Physical Achievements

Constructions et Réhabilitations

	Constructions		Pistes			Ponts			saignées de traversées			Dalots
	Hangars	Bureaux coopératifs	réalisé	en cours	Total	réalisé	en cours	Total	réalisé	en cours	Total	Total
Mulindi	15	1	11.5	15	26.5	3	0	3	0	51	51	3
Kinihira SORWATHE	6	1	0	4	4	0	0	0	0	0	0	0
Pfunda	9	1	18	8.5	26.5	0	1	1	0	53	53	0
Nyabihu	12	0	13.5	0	13.5	2	3	5	15	55	70	0
Shagasha	23	1	13	0	13	0	3	3	0	54	54	0
Mata	18	0	12.4	0	12.4	9	0	9	56	0	56	0
Gisakura	13	2	10	5	15	0	8	8	0	40	40	11
Rubaya	3	1	0	0	0	0	0	0	0	0	0	0
Gisovu	17	1	21	0	21	0	5	5	49	24	73	0
Kitabi	10	0	6	0	6	2	0	2	28	0	28	0
Nshili Kivu	6	0	0	0	0	0	0	0	0	0	0	0
Gatare	4	0	0	0	0	0	0	0	0	0	0	0
Mushubi	6	0	0	0	0	0	0	0	0	0	0	0
Rutsiro	6	0	0	0	0	0	0	0	0	0	0	0
Total	148	8	105.4	32.5	137.9	16	20	36	148	277	425	14

Bornage et pépinières

	Drainage Kms	Reprofilage Kms			
	Création secondaires	1aire	2aire	3aire	Total
Mulindi	150.0	92.0	312.0	0.0	554.0
Kinihira SORWATHE	147.0	103.0	345.0	565.5	1 160.5
Pfunda	154.0	13.0	343.0	204.0	714.0

Bornage	Pépinières
Ha	Nb plants

Nyabihu	0.0	308.3	41.0	0.0	349.3		
Shagasha	0.0	64.3	0.0	0.0	64.3	385.6	
Mata	0.0	302.0	0.0	0.0	302.0	859.0	
Gisakura	0.0	170.8	97.0	0.0	267.8		
Rubaya							
Gisovu							7 000 000
Kitabi						936.0	
Nshili Kivu							
Gatare							
Mushubi							
Rutsiro							
Total	451.0	1 053.4	1 138.0	769.5	3 411.9	2 180.6	7 000 000

Distribution des Superficies par type de producteur

USINE	ENTITE	SUPERFICIE(HA) FIN 2005	EXTENSION 06-09	Total 2009	Productive 09	BI	Coopthe	Village tea
MULINDI	BI	136.1	39.8	175.9	136.1	175.9		
	COOPTHE Mulindi	550.7	23.2	573.9	550.7		573.9	
	COTHEVM	822.0	183.0	1 005.0	950.0			1 005.0
	TOTAL	1 508.8	246.0	1 754.8	1 636.8			
SHAGASHA	BI	38.0	0.5	38.5	37.8	38.5		
	COOPTHE SHAGASHA	515.0	0.0	515.0	515.0		515.0	
	UMUCYAGI	956.0	0.0	956.0	968.0			956.0
	TOTAL	1 509.0	0.5	1 509.5	1 520.8			
GISAKURA	BI	357.0	0.0	357.0	357.0	357.0		
	COOPTHE Gisakura	627.9	0.0	627.9	627.9		627.9	
	COOPTHEVIGI	405.0	28.0	433.0	433.0			433.0
	TOTAL	1 389.9	28.0	1 417.9	1 417.9			
MATA	BI	609.0	6.0	615.0	610.2	615.0		

	COOTHENYA	475.1	7.0	482.1	464.4		482.1
	TOTAL	1 084.0	13.0	1 097.1	1 074.6		
KITABI	BI	350.0	39.9	389.9	350.0	389.9	
	KOBACYAMU	700.0	181.5	881.5	700.0		881.5
	TOTAL	1 050.0	221.4	1 271.4	1 050.0		
GISOVU	BI	340.0	17.8	357.8	350.0	357.8	
	COOTHEGIM	727.8	109.0	836.8	835.8		836.8
	TOTAL	1 067.8	126.8	1 194.6	1 185.8		
RUBAYA RMT	BI	647.0	45.0	692.0	647.0	692.0	
	COOTRAGAGI	405.0	80.6	485.6	405.3		485.6
	TOTAL	1 052.0	125.6	1 177.6	1 052.3		
NYABIHU RMT	BI	627.7	88.0	715.7	540.0	715.7	
	COOPTHEGA	31.0	0.0	31.0	31.0		31.0
	TOTAL	658.7	88.0	746.7	571.0		
PFUNDA	BI	105.6	8.5	114.1	105.6	114.1	
	COOTP	786.0	24.0	810.0	778.0		810.0
	TOTAL	891.6	32.5	924.1	883.6		
SORWATHE	BI	262.0	15.0	277.0	262.0	277.0	
	ASSOPTHE	880.0	37.1	917.1	897.4		917.1
	TOTAL	1 142.0	52.1	1 194.1	1 159.4		
NSHILI	BI	731.0	0.0	731.0	626.0	731.0	
	COOTHENK	225.0	0.0	225.0	225.0		225.0
	PDCRE	0.0	237.0	237.0	195.0		237.0
	TOTAL	956.0	237.0	1 193.0	1 046.0		
MUGANZA-KIVU	Mutangana	0.0	47.0	47.0			47.0
	Muganza-Kivu	0.0	201.0	201.0			201.0
	TOTAL	0.0	248.0	248.0	0.0		
MUSHUBI	PDCRE(TV)	0.0	415.0	415.0	130.0		415.0
	MIG	0.0	400.0	400.0	120.0		400.0

	TOTAL	0.0	815.0	815.0	250.0			
KARONGI	Siza	0.0	697.0	697.0	321.0			697.0
	Rugabano	0.0	267.8	267.8	99.0			267.8
	Gatare(KARYEBWITE)	0.4	114.4	114.7	25.0			114.7
	TOTAL	0.4	1 079.1	1 079.5	445.0			
Rutsiro	BI	0.0	196.6	196.6	0.0	196.6		
	TV	0.0	23.5	23.5	0.0			23.5
	TOTAL	0.0	220.1	220.1	0.0			
NYABIHU- NGORORERO	RAMBA	0.0	95.8	95.8	0.0			95.8
	RUBAYA	0.0	218.3	218.3	0.0			218.3
	NYABIHU	0.0	139.7	139.7	0.0			139.7
	TOTAL	0.0	453.8	453.8	0.0			
TOTAL Général		12 310.1	3 986.8	16 296.9	13 293.0	4 660.4	1 716.7	9 919.8
						BI	Coopthe	Village tea
						29%	11%	61%

ANNEX 9. Bench Terraces Physical Achievements

OSTRs recrutées, montants des marchés, niveau des réalisations en %, effectif des terrasses et ouvriers recrutés.

District	OSTR	Site/Cellule/Secteur	Superficie totale à aménager ha	Montant total de supervision OSTR en Frw	Effectif des bénéficiaires des terrasses radicales par site	Effectif ouvriers femmes enregistré par site	Effectif ouvriers hommes enregistré par site	Effectif total ouvriers ayant travaillé par site
Gasabo	APAPE	Cyili/Cyili/Rutungu	75	10 674 000	469	29	21	50
	AMUG	Kandamira/Kandamira/Rutungu	75	11 235 000	423	18	14	32
	FOREST	Rwintore/Rwintore-Rukereza/Rutungu	87	12 702 000	215	32	28	60
	PARVA	Gasagara/Gasagara/Gikomero	73	9 490 000	124	29	53	82
	S/TOTAL		310	44 475 000	1 231	108	116	224
Rulindo	UTSE	Gatwa/Bugaragara/Shyorongi	75	10 078 500	79	174	119	293
	AMUG	Kigarama/Bugaragara/Shyorongi	60	8 988 000	424	64	37	101
	FOREST	Ngabitsinze/Migendezo/Cyinzuzi	105	15 330 000	1 010	128	182	310
	PARVA	Gako-Kabuye/Gako/Rusiga	77	10 010 000	376	31	23	54
	S/TOTAL		317	44 406 500	1 889	397	361	758
Burera	UTSE	Rukandabyuma/Rukandabyuma/Rugengabari	110	14 561 800	650	1 893	1 320	3 213
	APAPE	Ndongezi/Nyamugali/ Nemba	30	4 500 000	323	254	179	433
	APEGIR	Nyirabirande/Nyamugali/Nemba	50	7 080 000	288	145	98	243
	ALUPA	Ntazi(Nyamusanze-Rujanja)/Ndongozi/Cyeru	60	8 520 000	560	255	165	420
	FOREST	Rwerere/Rucoco/Tangata	30	3 918 750	340	326	334	660
	ABONGERA MUSARURO	Ryaruhirima/Ndongozi/ Cyeru	30	4 320 000	157	234	126	360
	S/TOTAL		310	42 900 550	2 318	3 107	2 222	5 329
	Nyabihu	FOREST	Nyamitanzi/Nyamitanzi/ Jomba	40	5 840 000	360	347	263
PARVA		Kivuruga/Mwiyanike/Muringa	60	7 800 000	520	558	372	930
AGRI FOREST		Shaki/Shaki/Shyira	30	4 778 040	240	347	263	610
UTSE		Guriro/Guriro/Jomba	40	5 455 200	278	497	308	805
CDCEMU		Gasura/Gasura/Jomba	60	7 200 000	450	645	430	1 075
PARVA		Protection Bassin versant Jenda				219	141	360
S/TOTAL			230	31 073 240	1 848	2 613	1 777	4 390
Karongi	APEGIR	Musasa/Musasa/Gishyita	50	7 200 000	272	88	72	160
	ABONGERA MUSARURO	Nyarusange/Kinyovu/Ruganda	55	7 755 000	269	96	91	187
	ANA RWANDA	Rugabano	30	3 559 500	158	736	782	1 518
	ANA RWANDA	Rugabano	15	2 434 575	132	306	286	592

	ANA RWANDA	Nyagasozi/Tongati/Gashari	40	6 492 200	65	321	282	603
	PARVA	Bukiro/Bukiro/Murundi	60	9 312 000	206	463	308	771
	ACPE	Kadehero/Kinyunzwe/Mutuntu	60	9 060 000	124	378	350	728
	S/TOTAL		310	45 813 275	1 226	2 388	2 171	4 559
Nyaruguru	AMUG	Kibeho/Mubuga	36	13 107 500	62	625	239	864
	AMUG	Ruheru/Nyabisindu	56		109	827	731	1 558
	ALUPA	Munini/Uwumuko II	20	2 840 000	42	180	95	275
	ALUPA	Munini/Uwumuko I	40	5 680 000	79	253	135	388
	APA	Ngeli/Ngeli/Munini	47	6 705 000	133	330	220	550
	PAGEPO	Busanze/Uwinteko	36		121	325	275	600
	PAGEPO	Rusenge/Nyamugari	23	7 869 750	43	219	124	343
	DUHAMIC ADRI	Busanze/Nkanda	30	5 248 250	121	386	240	626
	DUHAMIC ADRI	Rusenge/Kiramutse	12		46	67	41	108
	S/TOTAL		300	41 450 500	756	3 212	2 100	5 312
	Total		1 777	250 119 065	9 268	11 825	8 747	20 572

NB: - Coloration en bleu concerne les Districts de Gasabo et Rulindo qui, en plus de la main d'oeuvre locale, utilisaient les TIGistes dans les travaux de terrassement radical en proportion de 80% de la main d'oeuvre totale. D'une manière générale, les TIGistes enregistrés par District sont tournaient au tour de 800. La rémunération journalière de 650Frw par homme jour a provoqué beaucoup d'absences de la main d'oeuvre. Cela a été remarqué sur environ un semestre. La main d'oeuvre engagée ne se présentait pas régulièrement aux chantiers de terrassement radical. Ceci a eu comme conséquences la prolongation du délai des travaux.

ANNEX 10. STABEX Financial Status

	III. Eng. Primaire Modifiée 03/03/2010	IV Eng Sec au taux de l'engagement	V. Eng. Sec. Réel au taux du payment Feb 2010	VII. Paiement sur Eng. Secondaire au 31/03/2010
			Total	Total
Coffee Sub Programme				
DP Café n°1		1 491 702	1 491 702	1 491 702
DP Café n°2		2 676 730	2 676 730	2 676 730
DP Café n°3		1 901 801	1 901 801	1 901 801
DP Café n°4		1 479 773		1 670 824
DP Café n°5		1 442 633	1 442 633	880 630
DP1 Labo		- 727	- 727	- 727
Etude labo in vitro		53 571	53 571	53 571
DP Labo in vitro n°2 + avenants		316 485	316 485	316 485
DP Labo in vitro n°3 + avenant		145 142	145 142	145 142
DP4 ISAR		201 795	201 795	162 176
Sub total CAFE	10 226 649	9 708 904	8 229 131	9 298 334
Privatisation Sub Program				
DP n°1 Thé		74 969	74 969	74 969
Subvention théiculteur		18 375	18 375	18 375
Cloture Anciens projets Thé		- 100 796	- 100 796	- 100 796
DP n°2 Thé + avenant 1		610 169	610 169	607 849
DP n°3 Thé		796 272	796 272	796 439
DP n°4 Thé		1 412 406	1 412 406	1 000 911
Protocole d'Accord n°1 Pyrethre		200 000	200 000	200 000
DP N°1 Pyrethre + avenant		81 395	81 395	81 395
DP2 Pyrethre		370 930	370 930	214 377
Sub total PRIVATISATION	3 944 884	3 463 719	3 463 719	2 893 519
Diversification				
Etude Diversification		76 766	76 766	76 766
DP1 Terraces radicales		73 747	73 747	73 747
DP2 Terraces radicales		109 086	109 086	86 297
DP1 GASABO + Av1		576 616	576 616	475 754
DP1 KARONGI + Av1		574 365	574 365	579 386
DP1 NYARUGURU + Av1		575 332	575 332	465 813
DP1 RULINDO + Av1		576 616	576 616	455 181
DP1 NYABIHU + Av1		575 824	575 824	472 624
DP1 BURERA + Av1		576 268	576 268	438 558
DPs Districts total			3 455 021	2 887 316
DP1 Projets diversification		- 54 946	- 54 946	- 54 946
DP2 Diversification		1 521 922	1 521 922	1 095 330
Sub total DIVERSIFICATION	5 239 946	5 181 597	5 181 597	4 164 511
Decentralisation Sub Program				
DP1 appui au PNRP		1 665 277	1 665 277	1 665 277
DP Infrastrucutre Sociale		- 22 343	- 22 343	- 22 343
Sub total DECENTRALISATION	1 642 934	1 642 934	1 642 934	1 642 934
TA				
Contrat BDPA		1 690 343	1 690 343	2 445 470
Avenant 3 BDPA		185 000	185 000	
Avenant 4 BDPA		424 640	424 640	
Avenant n°5 + Imprevus		235 531	235 531	
Sub total TECHNICAL ASSISTANT	2 575 514	2 535 514	2 535 514	2 445 470

Evaluation, Audit				
Audits (AUGECO , KPS)		36 393	36 393	36 393
Augeco DP1 Labo et DP2 CAFE		12 811	12 811	12 811
Audit COM Stabex		13 874	13 874	13 874
Audit DP2 ISAR		9 480	9 480	9 480
Audit DP2 THE & DP3 CAFE		26 985	26 985	26 985
Audit Pepinière CAFE 2007-2008		5 088	5 088	5 088
Audit 5 DPs		33 286	33 286	33 286
Verification Financire COM Stabex		5 000	5 000	-
Evaluation Ecofin Terrasses radicales		105 425		
ECOFIN Stabex		100 385		
Audit final 12 DPs				
Audit financier COM Stabex(2007-2011)				
Interet bancaire		881	881	881
Sub total AUDIT & VAL	534 557	349 608	143 798	138 798
Contingences				
Cuir et Peaux1		44 402	44 402	44 402
Interets retards cuir et peaux		2 109	2 109	2 109
Sub total CONTINGENCIES	46 353	46 511	46 511	46 511
Total	24 210 837	22 928 787	21 243 204	20 630 077

ANNEX 11. **Coffee Financial Status**

Cumulated PE					
	Budget RWF	Achievements RWF	Budgets Euro	Achievements Euros	% of Budget
Dissemination coffee plants	1 274 110 000	1 108 662 225	1 792 955	1 455 235	17%
Incentive for remplacing old plants	2 028 534 139	2 157 431 998	2 900 668	2 978 280	34%
Vehicles OCIR CAFÉ	127 164 408	116 049 408	106 559	158 493	2%
Wages OCIR CAFÉ	149 237 892	129 591 003	192 778	165 326	2%
Operation costs OCIR CAFÉ	490 046 346	395 727 924	656 972	521 847	6%
Training cooperatives	749 622 096	693 088 793	1 021 425	937 729	11%
Post harvest coffee	266 710 592	218 324 535	360 247	291 952	3%
WS Construction and rehabilitation	1 964 233 963	1 596 840 021	2 614 198	2 112 499	24%
Investigator ISAR	1 116 688	1 116 688	1 861	1 861	0%
Micellaneous	215 910 542	50 899 928	281 833	63 633	1%
Total	7 266 686 666	6 467 732 523	9 929 496	8 686 855	100%

ANNEX 12. **Tea Financial Status**

Cumulated PE	RWF		
	<i>Budget</i>	<i>Achievements</i>	<i>% budget</i>
<i>Infrastructures</i>	3 306 348 701	1 648 272 533	96%
Drainage	620 018 887	337 640 799	20%
Rehabilitation Storages	241 524 705	128 054 375	7%
Bornage	35 100 000	0	0%
Training	51 474 750	3 449 710	0%
Access roads	175 063 450	114 867 339	7%
Equipment OPA	1 973 108 736	943 397 040	55%
Nurseries	86 258 120	38 598 120	2%
Visibility	123 800 053	82 265 150	5%
<i>Institutional building</i>	95 456 398	72 835 708	4%
<i>Visibility</i>	10 000 000	2 333 800	0%
<i>Bank fees</i>	160 500	162 500	0%
<i>Miscellaneous</i>	39 000 000	0	0%
Total	3 450 965 599	1 723 604 541	100%
Total initial Budget	5 642 300 562		
Addendum (Engag.)	409 983 726		
Addendum (Desang.)	601 998 913		
Final Budget	5 450 285 375		

ANNEX 13. **Pyrethrum Financial Status**

Cumulated PE	RWF
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<i>RWF</i>	Budget	Achievements	% of budget
Distribution of vegetative stock	148 575 190	70 982 710	21%
Fertilisation	161 011 500	30 521 020	9%
Purchase of seeds	153 000 000	1 872 980	1%
Clone studies	34 873 500	0	0%
Construction of dryers	59 965 833	13 930 976	4%
Construction of collecting facilities	34 366 667	9 316 450	3%
Training	416 421 666	98 719 318	29%
Technical Assistance	3 316 525	0	0%
Micellaneous	311 530 881	111 397 822	33%
TOTAL	1 323 061 762	336 741 276	100%

ANNEX 14. **Financial Analysis of some visited projects****Profitability analysis Remera Buffcoffee WS - Butare**

Sales green coffee	unit price			Sales
	USD	RWF	MT	RWF
Lot 1	5.2	2 964	1.8	5 335 200
Lot 2	4.7	2 679	12	32 148 000
Lot 3	4.1	2 337	18	42 066 000
Lot 4	3.6	2 052	18	36 936 000
Lot 5 parchment		710	20	14 200 000
Total Sales			82.25	130 685 200
Operating Costs				
Staff*				7 000 000
Other expenditures				9 000 000
truck rental				2 080 000
Parching		25000	82.25	2 056 250
Credit charges		13%	71 200 000	9 256 000
				29 392 250
*4 permanent and 40 to 80 temporary				
Purchase Costs		Quantity	Unit price	costs
Farmers*		411.25	135	55 518 750
Fertilizers		411.25	23	9 458 750
				64 977 500
*in 2010 the price is 160				
Total Costs				94 369 750
Gross margin				
Net profit				36 315 450
%				28%

Ratio: 5 kg coffee cherries for 1 kg of parchment and 800 gr. (80%) of raw coffee for 1 kg of coffee parchment.
Parchment process is RWF 25/kg, means RWF 25.000 /MT.

Profitability analysis of Rulindo Washing Station

Fixed costs	For Parchment		for 100MT
	<i>low season</i>	<i>peak season</i>	Total
Permanent staff number	4	4	4
Permanent staff monthly salary			140 000
Permanent staff months			12
Permanent staff cost			6 720 000
Cost for maintenance			100 000
Investment Amortization 10 years			7 200 000
To fixed costs			14 020 000

Variable costs for 100 MT parchment	<i>low season</i>	<i>peak season</i>	Total
Temporary employees			
Temporary number	27	35	
Temporary days	40	60	100
Temporary cost at RWF 750/day	810 000	1 575 000	2 385 000
Total yearly wages for temporary staff			2 385 000
Fuel (2 liter per day/100MT parchment)			200
Fuel cost /100MT parchent at 950/litre			190 000
number of Bags 100kg for 20MT in rotation			200
200 Bags 100kg at 300 RWF			60 000
number of Bags 60kg			1 667
cost of Bags 60kg at 1800 RWF			3 000 000
Total Cost of Bags			3 060 000
Rate cherries/Parchment			6
Purchase costs cherries at RWF 175			105 000 000
Financial costs for purchase at 13%			13 650 000
Contingencies 10%			11 063 500
Total Variable costs/100MT			135 348 500

Sales for 100 MT parchment			Total
Sales quantity of green coffee kg			75 000
Sales price in USD			4.0
Exchange rate			570
Sales price in RWF			2 280
Total Sales			171 000 000

Net INCOME			21 631 500
ROI%			10%

Rulindo Washing Station calculation of IRR

<i>RWF Million</i>	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Parchment MT	0	40	80	100	100	100	100	100	100	100	100
Investments	-72										
Fixed costs		-14	-14	-14	-14	-14	-14	-14	-14	-14	-14
Variable costs		-54	-108	-135	-135	-135	-135	-135	-135	-135	-135
Inflows sales		68	137	171	171	171	171	171	171	171	171
Cash flow	-72	0	15	22	22	22	22	22	22	22	22
VAN											38
IRR											19%

Computation has been made on the basis of realistic processing quantities of parchment, given the present performance of the WS, the actual number of coop members, and the drying capacity, to gradually meet 100 MT.

Pay Back Honey project

	Scenario 1	Scenario 2	Scenario 3
Hives	200	200	200
honey/hive Kg	15	20	30
price of honey /Kg	1 500	1 500	1 500
Sales / Year	4 500 000	6 000 000	9 000 000
project Cost	118 726 203	118 726 203	118 726 203
Pay back	26.4	19.8	13.2

Soy Project - Financial Analysis

Soy production sept déc 2009	Total	Impakomou	Wata	Abyunze
Members	1626	200	776	650
members having produced in 2009		100	60	80
production hectares		5.5	2	4
Area /member (ha)		0.06	0.03	0.05
purchased Production Tons	6.3	2.5	1.3	2.5
purchased Production per member Kg		25	21.7	31.3
RWF /kilo	300	300	300	300
Projection 2010 (ha)		12.5	4	6
Projection number of members		150	105	80
Yield/ member		100	20	100
Projection / member MT		15.0	2.1	8.0
2 nd Projection 2010 (ha)		12.5	4	6
Projection number of members		150	300	250
Projection Yield/ member		100	100	100
Projection par membre MT		15.0	30.0	25.0
Processing Coop Abahuje		6.3		
Purchase MT		3		
Purchase costs at RWF 250 - 300		270		

Processing MT	9.3
Production costs kilo	643
Sales price Tofu /kg	1000
Net Income /kg	357

Soy Project – Pay Back

Projection	2009	2010	Acceptable	Recommended
Production	9.3	25.1	54.3	72.4
Sales price Tofu /kg	357	357	357	357
Total Net Margin FRW	3 320 100	8 960 700	19 388 100	25 850 800
Projet cost	77 552 401	77 552 401	77 552 401	77 552 401
Pay back (years)	23	9	4	3

Macadamia – Pay Back

	Units	Unit price	Total
Operation costs			6 000 000
Amortizing			3 200 000
			9 200 000
Revenue	11700	1500	17 550 000
Net			8 350 000
STABEX investment			66 456 300
Pay back (years)			8

Goats and Cheese – Pay Back

Project cost	58 016 443	58 016 443
cheeses / day	10	15
cheeses / year	2 500	3 750
unit price	2 500	2 500
Income	6 250 000	9 375 000
Pay back 1 st projection	9	6
sale of billy goats	160	160
unit price	15 000	20 000
total sales goats	2 400 000	3 200 000
Total sales	8 650 000	12 575 000
Pay back 2 nd projection	7	5

Production of Essential Oils –Pay Back

Cycle1 (million RWF)	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Final product Kg	30	30	50	100	100	100	100	100	100	100
Cycle2										
Final product Kg		30	30	50	100	100	100	100	100	100
Cycle3										
Final product Kg			30	30	50	100	100	100	100	100
Total Kg/year	30	60	110	180	250	300	300	300	300	300
Sales in 1000 USD at 2500 USD	75	150	275	450	625	750	750	750	750	750
Sales in MRWF	43	86	157	257	356	428	428	428	428	428
Production costs	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Fixed costs 1000 USD	11	11	11	11	11	11	11	11	11	11
Variable costs 1000 USD	34	68	124	203	281	338	338	338	338	338
Fixed costs MRWF	6	6	6	6	6	6	6	6	6	6
Variable costs MRWF	19	38	71	115	160	192	192	192	192	192
Contingencies 10%	3	4	8	12	17	20	20	20	20	20
Total production costs MRWF	28	49	85	134	183	219	219	219	219	219
Net profit MRWF	15	36	72	122	173	209	209	209	209	209
Investments MRWF	-93									
Cash flow MRWF	-78	36	72	122	173	209	209	209	209	209
VAN										695
IRR										97%
Pay back	-78	-42	30	152	325	534	743	952	1 160	1 369

Integrated Fish production – Pay Back

Annual costs			RWF
Staff salaries			12 871 200
Purchase animals			5 085 250
Office rental			4 200 000
Vehicle rental			3 600 000
Total operation costs			25 756 450
Amortization	unit cost	Rate	RWF
Computer	450 000	20%	90 000
21 ponds * at 2 500 000	52 500 000	20%	10 500 000
Total amortization			10 590 000
Total costs			36 346 450
Annual Sales			RWF
	unit cost	units	
Fishes 2800kg /month	1 500	33600	50 400 000
Chicken 100 *5 ponds/6 months	4 000	1000	4 000 000
20 rabbits / month	2 000	240	480 000
Total sales			54 880 000
Net profit			18 533 550
STABEX investment			69 652 500
Pay back years			3.8

Production of Potatoes– Pay Back

RWF	A1	A2	A3	A4	A5	A6	A7
production hectares	7	13	13	13	14	15	16
Production Tons	140	260	260	260	280	300	320
Costs	14 106 400	26 197 600	26 197 600	26 197 600	28 212 800	30 228 000	32 243 200
Number of members	372	372	372	372	372	372	372
Area of members	500	500	500	500	500	500	500
Need seeds members	1 250	1 250	1 250	1 250	1 250	1 250	1 250
Sales to members at 150	21 000 000	39 000 000	39 000 000	39 000 000	42 000 000	45 000 000	48 000 000
Sales to non members 200	0	0	0	0	0	0	0
Margin	6 893 600	12 802 400	12 802 400	12 802 400	13 787 200	14 772 000	15 756 800
Investments	69 000 000	-62 106 400	74 908 800	-62 106 400	74 908 800	-61 121 600	75 893 600
Pay back	-62 106 400	74 908 800	-62 106 400	74 908 800	-61 121 600	75 893 600	-60 136 800