CASE PROJECT Baseline study Report



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FOREWORD

Community-assisted Access to Sustainable Energy (CASE) project aims at reducing the gap between biomass energy supply and demand for 24,000 poor rural and peri-urban households in the districts of Nyamagabe, Nyaruguru, Gisagara and Huye of southern province in Rwanda by 50% by the year 2010. The project is co-funded by the European Commission, Austrian Development Agency, CARE Austria and CARE Rwanda. The project intends to promote the use of improved cooking stoves and charcoal production with firewood saving techniques.

The project promotes not only the use of improved stoves and carbonization techniques, but also the production of improved stove as an income generating activity. It will conduct environmental education in the project area and provide capacity building to stove makers and charcoal producers. This report presents the results of the baseline study carried out in 8 sectors of the project intervention area during the month of April 2008.

The report has six main components;

The Executive Summary provides the main results and key assumptions of the baseline study. The introduction describes briefly the country and project. The third part outlines the methodology used during the survey. The project intervention area is sketched out in the fourth part. Findings of the baseline study are summarized in fifth part. And there is also conclusion, recommendations.

The report includes also appendixes and three of them require an attention;

- Appendix 1: Revised logical framework with baseline data
- Appendix 2: Profile of households that could be targeted by the project and criteria for selecting them;
- Appendix 3: Technical, organizational and managerial capacity assessment of project partners (CITT and ADENYA) and actions for further capacity building to them as required.

I. EXECUTIVE SUMMARY

CASE Project started in January 2008 and is being implemented by CARE international-Rwanda in partnership with KIST CITT and ADENYA¹. A total of 24,000 poor Households of Nyaruguru, Huye, Gisagara and Nyamagabe² are targeted and the project intends to reduce by 50% firewood used by 2010.

The baseline study brings out the current situation of energy supply and demand as well as household condition in the targeted area. The analysis assessed the time and quantity saved for a household using improved stoves as well as household improved living conditions (income, education, health and environmental impacts) derived from the use of the improved stoves.

Out of 813 households surveyed 771, i.e 95% use firewood as the main source of energy for cooking, 45 use charcoals for cooking and 16 households use both firewood and charcoal. In some areas vegetables and plant residues are used for cooking and lighting. 40% households use Kerosene as the source of energy for lighting. Batteries are used both for lighting and entertainment (radio) by 33% households.

85% of households which use traditional stoves do not pay for firewood but collect them. The percentage of those households which collect firewood is 71% for those households using improved stoves .Most of the time (beyond 95%), it is the womwen and children who are responsible for fecthing firewood. 94% interviewed people says that the supply of energy and especially cooking energy is less enough for their diary needs.

To increase the supply of firewood and offset the emission of Dioxide Carbon, only 58% households Of 813 has planted at least one tree during the year 2007 and the average number of tree planted per household is 18. The lack of thorough environmental education and the high density of the population (in some rural area it goes up to 628ha/km²) are the main hindrances of tree plantation in the project target area.

In order to reduce firewood used, two main types have been introduced; fixed and movable stoves. Households used them depending on areas (rural and per-urban), their size, needs for cooking, row material existing in the region, fuel used as well as cost for acquiring.

A good number of movable improved stoves are made up with metal and clay and utilize charcoal as fuel. Six categories of them, used most the time in urban and per-urban areas, can be found on the Huye or Nyamagabe markets at the cost which varies between Rwfr 500 and 2500.

Fixed improved stove can be found in the most cases in rural areas and built for free to the rural poor population. The population had to provide raw materials available in the region and local authorities offered technical support. In some areas a limited number of the population were trained on improved stove making but in the most cases it is the Rwanda Defense Force (National Army) or other government institutions like PAFOR which built them. Among fixed improved stoves, 4 types are introduced and used and the most popular is the round mud stove which is made with mud and clay. Photos of those different types of (fixed and movable) improved stoves can be found in appendix 7.

Of 813 households interviewed 392 (48.2%) use improved stoves at the level of 100% and 335 (41.2%) do not use them. 86 (10.60%) use both traditional and improved stove at the same time at different levels. This is due to several reasons including the lack of mobilization and sensitization on improved stove use, unavailability of community members who are trained on improved stove making and repairing. Nevertheless, some associations and CARE's VSLG are engaged in improved stove making businesses.

¹ The technical, organizational and managerial capacity of CITT and ADENYA and proposed actions for further capacity building to them as required can be found in Appendix 3

² See maps of those districts in appendix 8

This is the case of a CARE's VSLG of Ngoma (Huye District) and KORA association of Huye. In some areas improved stoves are not used at the level of 100% due to the eating, cooking and hitting habits.

The baseline assesses further the economic payback as well as benefits on health and environmental impacts derived from the use of improved stoves in the project target area for those households using the improved stoves. The use of improved stove has an impact on firewood saving and money spend on energy but also reduces the harmful effects on environment and health. It could be shown I table below that the use of improved stove yield high returns on several levels.

The impact of the use of improved stoves on time, income and quantity of firewood used					
	Three stone	Improved	Saved by those HHs which		
	stove	stoves	use improved stoves		
Quantity of Firewood used per month	308 kg	187kg	121kg (39.2%)		
Time used to collect firewood per month	11h54'	07h8'	4h46' (40.0%)		
Time used to cook per day	3h46'	2h10'	1h36' (42.4%)		
Money paid for firewood per month	Rwfr 10,098	Rwfr 5940	Rwfr 4.158 (41.1%)		

Source: Primary data

Even if time and available materials did not allow the determination of exact existing carbon emission at the household level, the level of carbon emission can be observed on the roof and wall of kitchen/house. Roof and walls of kitchens and houses with three stones stoves have became blacker than those which use improved stoves. This is due that three stones emit the smoke in all directions. It has been found that more than 96% of interviewed households are not aware of the threat of indoor air pollution on health.

Women and children less than 5 are the most vulnerable categories threatened by indoor smoke inhalation. 75% cases found, it is the woman who is responsible for cooking and has to spend on average 1 hour and 44 minute cooking and in some cases with a baby on her back. 164 households out of 813 which represent 20.17% are highly threatened by indoor smoke inhalation because they not only cook with tree stones stoves but also in the one of rooms of the house they live in.

To assure the use of improved stove and reduce the consumption of biomass for cooking, a campaign of mobilization and sensitization on the use of improved stoves as well as its impact on health and environment has to be conducted in the project target area. The community has also to own the technology on improved stoves making and reparation through trainings. 69.7% interviewed say that they are ready/ interested to start improved stove making businesses. Those community members once trained, they will help in follow-up and/or monitoring by marketing their new products; improved stoves. This will assure not only the quality of improved stoves made (through completion of community maker) but also sustainability of the usage after the project and even in the long term.

Note that in the project area, firewood is not only used for cooking but also for producing charcoal supplied on local and national markets. Even if the project target area is the foremost supplier of the country of charcoal, charcoal producers still using traditional carbonization techniques with which significant quantity of wood are lost during the carbonization. Additionally, charcoal production and selling sector is not structured and sustainable. Therefore improved carbonization techniques have to be introduced in order to save more wood. To transform charcoal sector into a viable business sector in the project area, charcoal producers need technical, organizational and managerial capacity building.

The project should back up existing initiatives of improved dissemination and use and introduce improved carbonization techniques in order to reduce firewood used for cooking and carbonization. Community members have to own those techniques and be organized into viable improved stoves making and charcoal production associations.

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LIST OF ACRONYMS

- 1. ADENYA : Association pour le Développent de Nyabimata
- 2. CARE : Cooperative Assistance Relief Everywhere
- 3. CASE : Community assisted Access to Sustainable Energy
- 4. CO2 : Carbon dioxide
- 5. EDPRS : Economic Development and Poverty Reduction Strategy
- 6. EICV : Enquête Intégrale sur les Conditions de Vie des Ménages
- 7. GoR : Government of Rwanda
- 8. HH : Household or households
- 9. IBC : International Business Centre
- 10. KIST : Kigali Institute of Science and Technology
- 11. LPG : Liquefied Petroleum Gas
- 12. M&E : Monitoring and Evaluation
- 13. MDG : Millennium Development Goals
- 14. NGO : Non-Governmental Organization
- 15. PAFOR : Projet d'amenagement forestier au Rwanda
- 16. RWF : Rwandan Francs
- 17. UNDP : United Nations Development Programme
- 18. USD : US Dollar

GLOSSARY

- 1. Akagari : Cell
- 2. Akarere : District
- 3. Umudugudu/imidugudu: Village/s
- 4. Umurenge/imirenge : Sector/s
- 5. Ubudehe : Community-based participatory approach

II. GENERAL INTRODUCTION

II.1 THE COUNTRY

II.1.1 Geography, population and administration

Rwanda borders Uganda, Tanzania, Burundi and Democratic Republic of Congo. According to DHS-2005 report, its population is more than 9.2 Million inhabitants on a land surface of 26.338 km². It is the one of the most densely populated countries in Africa with about 321 inhabitants/ km² and goes even up to 628 inhabitants per km² in some rural area; with a population growth of 2.8 % per year and an effective useful surface of 18.740 km². The Republic of Rwanda is administratively subdivided into 5 provinces, 30 districts and 415 sectors being further subdivided in cells and Villages (Utugari and imidugudu). Imidugudu are agglomerations being established to gather the traditionally dispersed settled rural households around basic infrastructures such as schools, health centers, clean water markets and roads.

Out of the 30 districts, 4 districts of the southern province namely Huye, Gisagara, Nyamagabe and Nyaruguru are targeted by CASE project.

According to a survey (EICV2) conducted by the Rwanda National Institute of Statistics in 2006,

83% of the population lives in rural areas 87% of the Rwandan population is engaged in agriculture, mainly for household subsistence 62% of the population is classified as being poor

II.1.2 Poverty, Environment and forests

Poverty

Poverty is defined according to international standards in four dimensions³:

- Gross Domestic Product (GDP) per capita: income level and purchase power (PPP-US\$, 1 US\$ a day) Rwanda ranked at 149 among 172 countries;
- Human Development Index (HDI): life expectancy at birth, literacy rate at the age of 15 and older, and living standard Rwanda is ranked at 158 among 177 countries;
- Human Poverty Index (HPI): adds to the GDP and HDI dimensions of health, access to improved water source and the proportion of children under age 5 who are underweight Rwanda is ranked at 37 among 67 countries;
- Gender-related Development Index: measures achievements in the same dimensions using the same indicators as the HDI but captures inequalities in achievement between women and men – Rwanda is ranked at 28 among 136 countries.

³ UNDP Human Development Report 2006: The HDI measures average achievements in a country, but it does not incorporate the degree of gender imbalance in these achievements. The gender-related development index (GDI), introduced in Human Development Report 1995, it is simply the HDI adjusted downward for gender inequality. The greater the gender disparity in basic human development, the lower is a country's GDI relative to its HDI. Rwanda's GDI value, 0.449 should be compared to its HDI value of 0.450. Its GDI value is 99.8% of its HDI value. Out of the 136 countries with both HDI and GDI values, 27 countries have a better ratio than Rwanda's.





According to the EICV, surveys collected detailed information on household consumption, including the consumption of home produced items confirm that incidence of consumption poverty has fallen in both rural and urban areas since 2000/01 as it is shown in table below;

Poverty headcount (share of population and number)

	Poverty headcount (share of	f population)	Number of poor (millions)	
	EICV1	EICV2	EICV1	EICV2
Upper poverty line				
Kigali	16.1%	13.0%	0.11	0.09
Other urban	46.5%	41.5%	0.29	0.36
Rural	66.1%	62.5%	4.43	4.93
National	60.4%	56.9%	4.82	5.38
Extreme poverty line				
Kigali	8.4%	6.3%	0.06	0.04
Other urban	28.5%	25.3%	0.18	0.22
Rural	45.7%	40.9%	3.06	3.23
National	41.3%	36.9%	3.30	3.49

Table 1: Poverty headcount

Source: NISR (2006).

According to the *Ubudehe*⁴ survey, seven socioeconomic categories were identified. The distribution of respondents by these categories is presented in Table 2.3. Most people were in the *umuhanya (destitute)* and *umutindi (Poorer)* categories, indicating that they felt they were among the poorest. Vulnerable people were identified in order of greatest destitution, as widows, landless, ill, the elderly and childheaded households.

⁴ Ubudehe: Community-based participatory approach

Distribution of poor by categories

		Share of respondents (%)
Destitute	Umuhanya	18.0
Poorest	Umutindi nyakujya	52.5
Poorer	Umutindi	9.8
Poor	Umukene	7.1
Vulnerable	Utishoboye	4.8
Surviving	umukene wifashije	1.1
Others	Abandi	6.8
Total		100.0

Table 2: Distribution of poor by categories

Source: MINECOFIN (2007a)

Major causes of poverty identified

	Share of respondents (%)
Lack of land	49.5
Poor soils	10.9
Drought/weather	8.7
Lack of livestock	6.5
Ignorance	4.3
Inadequate infrastructures	3.0
Inadequate technology	1.7
Illness	1.7
Polygamy	1.2
Lack of access to clean water	1.1
Population pressure	0.7
Others	10.6
Total	100.0

Table 3: Major causes of poverty identified

Source: MINECOFIN (2007a)

Environment concerns and energy supply

Rwanda's key environmental challenges concern deforestation, soil erosion, misuse of wetlands and poor waste and waste water management. This is due to the rising of the population density in rural areas⁵. However, according to EDPRS, 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. In 2005/06, 60% of the rural population lived in communities that were engaged in reforestation activities, representing a large increase relative to 2000/01 for which the corresponding figure was 40% (*see appendix 6 Table A2.4*).

Deforestation

Due to the high demand for fuel wood as a basic source of energy by 95% of the population - both rural habitants and low income earners in town, Rwanda lost 50.2% of its forest and woodland habitat between 1990 and 2005⁶. It is estimated that 5490 km2 of the country's surface are covered with natural and replanted forests and woodland, representing about ¼ of the total territory.

⁵ EDPRS MINECOFIN (Dec.2007)

⁶ UNDP Report, 2006

More than 9,000 ha have been replanted in 2006, and 3,500 km of roadsides has been equipped with trees. A forest survey is ongoing and its results are expected in early 2008⁷.

Forests were also cleared in search for agricultural land and shelter for returnees after the 1994 genocide. This has had negative impacts on the environment such as soil erosion, and loss of biodiversity. Furthermore, demand for other timber products like charcoal, firewood for brick making, construction materials, and poles have greatly led to deforestation.

Energy supply

95% of the population uses firewood as cooking fuel. Buying firewood has become more difficult and/or expensive, because the Government has banned cutting wood or burning bricks for everyone without obtaining permission from the sector authorities first, to cut firewood for this purpose.

Only about 1% of the rural population is connected to the electric grid. For lighting purposes, candles, kerosene and torches are dominating, leading to strong in-door pollution and inconvenient light conditions for studying, reading or domestic works after sunset.

95% of Rwandans use firewood for cooking 87% of them use kerosene or wood as their source of lighting

II.2 BRIEF DESCRIPTION OF THE PROJECT

The Community-assisted Access to Sustainable Energy (CASE) project aims at improving access to modern and affordable energy services and sources for poor rural and per-urban households in Southern Rwanda while ensuring environmental sustainability and improving the social and economic well-being of the target groups by providing them an opportunity to engage in income-generating activities related to affordable energy services (contributing to MGD 1).

Specifically, the project is expected to reduce the gap between biomass energy supply and demand for 24,000 poor rural and per-urban households in the districts of Nyamagabe, Nyaruguru, Gisagara and Huye by 50% by the year 2010.

The project is to be implemented from January 2008 to December 2010, in partnership with the Centre for Innovation and Technology Transfer of Kigali Institute of Science and Technology (CITT-KIST) and the Association for the Development of Nyabimata (ADENYA). *The technical, organizational and managerial capacity of CITT and ADENYA and proposed actions for further capacity building to them as required can be found in Appendix 3.*

Project expected results are:

- ER1: At least 16,000 rural HHs and 8,000 per-urban HHs use improved stoves and save at least one ton of biomass per household per annum.
- ER2: 100 charcoal producers save 50% of wood by using improved carbonization techniques.
- ER3: 6,000 vulnerable women, 300 OVCYs and 100 charcoal producers make and sell their products, thus raising their income by at least 40%.

 $^{^{7}}$ Information received from MINITERE, Department of Reforestation and Agro Forestry, on May 6, 2008

Baseline study

A baseline study at the beginning of CASE project is vital to provide a picture of the status quo, from which measurement of progress can be made.

CARE international contracted independent consultancy, IBC Rwanda, to carry out the baseline study. The baseline aims at ascertaining the current situation of energy (especially for firewood and charcoal) supply and demand in the targeted area.

It is a key tool for implementation of CASE project and will be helpful not only at the beginning of the project but also during its implementation and perhaps later after the closure of the project.

At the beginning, the baseline will help to assess the relevance and accuracy of the indicators selected to measure progress towards achieving project objectives and, some indicators will be revised. In addition the baseline will guide project manager to select potential beneficiaries.

During the implementation, it will help in decision making, prevention and management of problems rose during the implementation.

After the closure of the project, the baseline will contribute not only to final evaluation but also to the design of other future projects related to the energy in the targeted area.

III. OBJECTIVES, APPROACH AND METHODOLOGY

III.1. OBJECTIVES OF THE BASELINE

This baseline study has the following objectives:

- Establish the level of each project indicator at the beginning of the project, with a particular attention to outcome and impact level of indicators;
- Assess the relevance and accuracy of the indicators selected to measure progress towards achieving project objectives;
- Ascertain the current situation of energy supply and demand in the target area;
- Review project log frame to assure the use of SMART indicators that will facilitate the evaluation of project results at the end of the life span.

III.2 APPROACH AND METHODOLOGY

The study combined quantitative and qualitative approaches, and has been carried out under participatory method, involving targeted beneficiaries, community-based organizations, civil society organizations and local authorities.

Baseline study components

The Baseline Study includes seven phases:

- 1. Desk study of relevant documents related to the project,
- 2. Data collection tool developed in English and Kinyarwanda. This consists of modules which shall be used for indicator development for future impact assessment surveys. These modules were formulated and codified in order to facilitate its analysis.
- 3. Field work; this aimed to collect relevant data by Households interviews and focus group discussions. The emphasis had to be given to the participation of vulnerable women and OVCYs;
- 4. Data entry and analysis in SPSS;
- 5. Presentation and discussion of first results with project stakeholders in order to define updated needs for project implementation;
- 6. Indicator review for CASE project Monitoring and Evaluation system
- 7. The final report

III.2.1 Data collection preparation and tools

IBC Rwanda provided 4 teams with 3 bilingual interviewers each, accompanied by 3 supervisors to conduct the interviews and focus group discussions. Field work (interviews and focus group discussions) were prepared jointly by the consultant, project managers and field officers of Nyamagabe CARE sub office.

a) Questionnaire development

To provide the required basic data, the following topics had to be considered in the questionnaire for household data collection:

- 1. General information about household and family members: age, sex, education, occupation, training and engagement in community groups, vulnerable women and OVCY;
- 2. Housing, cooking and facilities of household
- 3. Energy demand and supply in last 3 years
- 4. Food consumption habit and preparation
- 5. Households Duties and responsibility
- 6. Households Income and Expenses
- 7. Loans and savings
- 8. Construction materials available in the region
- 9. Future projects

The questionnaire in English had been developed and translated in Kinyarwanda. This should be applied also in the future impact assessment and monitoring surveys, facilitating appropriate modifications according to the priorities of the households resulting from the baseline data.

Focus group discussions guidelines have been also designed in order to help enumerators in conducting focus group discussions.

b) Questionnaire Pretesting and Training

In order to verify that all information needed is included in questionnaire or/and to be assured that all questions are well addressed, a questionnaire pre-testing has been carried out in Ngoma sector, Distric Huye in collaboration with the project responsible and CARE's field officer. Half-day training has been carried out to enumerators in order to familiarize them with the questionnaire and focus group discussions guidelines.

II.2.2. Data collection and entry in SPSS matrix

The baseline study report is produced from data collected from poor rural and per-urban households of four Districts beneficiaries of the project. These districts are located in southern province, namely:

- Nyamagabe,
- Nyaruguru,
- Gisagara and
- Huye

b) Calculation of the sample

The sample size is determined by the degree of accuracy, the time assigned to the study and available means (personnel and financial). Taking into account the time and budget, by using a purposive and quota sampling, we targeted to conduct 692 of poor rural and per-urban households targeted by the project.

The selection of households to be interviewed was based on the area (rural and per-urban), membership in VSLG, the degree of vulnerability, the sex and age.

The sample is set out as follows;

Targeted interviews

Table 4: Targeted interviews

		District			Total	
	GISAGARA HUYE NYAMAGABE NYARUGURU					
Sector	GASAKA	0	0	60	0	60
	KIBEHO	0	0	0	60	60
	MARABA	0	113	0	0	113
	MUGOMBWA	113	0	0	0	113
	NGOMA	0	60	0	0	60
	NKOMANE	0	0	113	0	113
	RUHERU	0	0	0	113	113
	SAVE	113	0	0	0	113
Total		226	113	173	173	692

Interviews conducted per sector and district

Table 5: Interviews conducted per sector and district

		District			Total	
		GISAGARA	HUYE	NYAMAGABE	NYARUGURU	
Sector	GASAKA	0	0	54	0	54
	KIBEHO	0	0	0	106	106
	MARABA	0	118	0	0	118
	MUGOMBWA	117	0	0	0	117
	NGOMA	0	156	0	0	156
	NKOMANE	0	0	81	0	81
	RUHERU	0	0	0	92	92
	SAVE	89	0	0	0	89
Total		206	274	135	198	813

In total 813 interviews have been conducted

Participation of stakeholders

Before the beginning of the study, approvals for conducting the survey from four districts have been availed.

In order to save time for data collection, local authorities of districts and sectors as well as beneficiaries concerned with the survey have been informed by CARE field officers before the beginning of the survey. The survey was participatory, information have been collected not only at the household level but also among different stakeholders including village savings and loans groups supported by CARE, local authorities, Community-based organizations, civil society organizations through focus group discussions and contacts. Discussions have been held among VSLGs, OVCY groups and charcoal producer associations.

The objective of those focused group discussions were to collect information concerning with the whole community (environment protection, number and type of existing energy (stoves and wood), time used to fetch firewood initiatives in the region, type of recommended stove by authorities, etc.). The focus discussions groups have been also used to collect specific information of the targeted group such as opportunities or challenges that face the specific group (e.g. OVCY, etc).

In total 19 focus group discussions have been carried out;

		Focus group discussions	
		Targeted	Done
. .	Vulnerable woman(VW)	8	10
Category	OVCY	8	4
	Charcoal maker	1	1
	Others		2
	VW and OVCY		1
	Charcoal Producer		1
	Total	17	19

Table 6: Focus group discussions

Source: Primary data

The information collected from focus group discussions nourished the quality of information collected at the level of households and helped to identify their accuracy.

Information gathered trough contacts with ccommunity-based organizations, civil society organizations and local authorities has completed the information gathered from interviews and focused group discussions and, help to understand, compare and analyse findings.

Data have been compiled in SPSS matrix by the same enumerators no later a week after data collection.

III.2.3 Data analysis

Data compilation and analysis have been processed in SPSS. Findings from interviews have been compared by those collected from focus group discussions and contacts. The analysis of all those information leads the conclusion and formulation of recommendations for project activities which have been considered in the definition of precise indicators for project planning, monitoring and evaluation and the selection of potential beneficiaries.

III.2.4 Reporting

a) The report

The first draft of the report was presented in the workshop organized by the project managers and CARE's Monitoring and Evaluation staff. The second presentation of the outcomes of the survey has been done to all stakeholders of the project on May 26th, 2008. Comments and suggestions from those workshops were incorporated in this final baseline report.

b) Data base and photographs

SPSS matrixes have been handed over to CARE as well as photographs taken during the survey.

c) Limitations of the study

Due to the limited time and lack of appropriate materials, carbon emissions at the level of household were not calculated. Charcoal producers were not able to approximate exactly the time and firewood needed to produce a given quantity of charcoal with traditional carbonization techniques. Time and budget constraints did not allow us to spend more time on the field and buy needed material in order to observe facts.

IV. DESCRIPTION PROJECT INTERVENTION AREA

IV.1 GISAGARA DISTRICT⁸

Geography, administration

Gisagara district is among the eight districts of the southern province. It is boarded in the East and in the south by the Republic of Burundi, in the north by the district of Nyanza and in the west by the district of Nyaruguru and Huye. It is subdivided into 13 sectors: Gikonko, Gishubi, Kansi, Kibilizi, Kigembe, Mamba, Muganza, Mugombwa, Mukindo, Musha, Ndora, Nyanza and Save. These sectors are also divided into 59 cells and 524 imidugudu. Gisagara district covers the surface of 678 Km2.

Population and poverty

The population of Gisagara district is estimated at 267,161 people with the density of more than to 411.7ha/km² which is slightly under the Rwanda density which is 321ha/km².

Out of 267,161 people, 122,093 are men and represent 45.7%, 145 068 are women and represent 54.3 % with 52% of young people under 20 years.

As it is shown in the table below the district of Gisagara faces a serious problem of poverty whereas 83.2% of its population is poor and only 16.8% are considered as rich people.

	Poor		Rich	
Sectors	No	%	No	%
Gikonko	3,667	83,0	753	17,0
Gishubi	4,455	87,6	629	12,4
Kansi	2,998	73,9	1,057	26,1
Kibilizi	4,924	89,0	606	11,0
Kigembe	3,834	93,9	514	12,6
Mamba	5,879	88,0	798	12,0
Muganza	3,349	73,2	1227	26,8
Mugombwa	4,067	82,7	853	17,3
Mukindo	4,824	89,8	545	10,2
Musha	3,926	80,9	927	19,1
Ndora	3,408	71,9	1,333	28,1
Nyanza	3,768	88,9	472	11,1
Save	4,277	75,8	1,363	24,2
Total	53376	83,2	1,1077	16,7

Table 7: Gisagara; population and poverty

Source: PDD of Gisagara district, July 2007.

Forestation

According to strategic plan of Gisagara, 1,460 ha have to be reforested in the period of 4 years, from 2008 to 2011. Akanyaru boarders will be protected from 10 to 75 km alongside the river until 2011. 1460 ha and 700 km alongside the roads will be protected with trees.

The strategic plan confirms that 100% of households use improved stoves but this information is subjected to verifications said the environment and natural resources protection agent at the district level.

⁸ Most Information of this section were received from Environment and natural resource offer in Gisagara district and the in PDD Gisagara (Jul.2007)

To reduce tree cutting, the district encourages the use of improved brick ovens. As schools use significance quantity of firewood, the district targets to install 18 bio-digesters in secondary schools by 2010.

Measures taken to reduce tree cutting

Measures to control tree cutting have been taken from the level of *umudugudu* including instauration of tree cutting and transportation permits.

Tree cutting permit is not needed in the case woods are for the household use. When the cutting is for business purposes, a tree cutting permit is given by the sector authorities when the forest is less than 1 hectare, and when the forest is more than one hectare, a tree cutting is offered by district authorities;

A part from a report confirming agronomist, every person who wants to cut trees for business purposes has to pay Rwfr 15,000 and 1% of the value of the forest which is put in forestry fund.

Those who want "tree products transportation permit" have to pay Rwfr 10,000 of the district tax and Rwfr 10,000 which is deposited in the national forestry fund, Rfw 100 per bag of charcoal and Rwfr 50 for each timber.

Needs and Challenges for reduction of tree cutting

According to the agent in charge of Environment and natural resources, households of Gisagara district do not have enough space to plant new trees. Even if the district has introduced improved techniques in bricks making/production there is no improved technique for charcoal production. The district needs to plant more trees alongside the roads and Akanyaru River. Mobilization and technical support are needed to help population to get and use improved stoves.

IV.2 HUYE DISTRICT

Geography, administration

Huye is known as the former Butare city and located in the southern province. It is constituted of 14 sectors: Mbazi, Kinazi, Simbi, Maraba, Rwaniro, Rusatira, Huye, Gishamvu, Mukura,, Ruhashya, Tumba, Kigoma, Ngoma, and Karama.

The general characteristics of the district are in the table below:

1, 0, 1		
Delimitation	North	District Nyanza
	East	Gisagara
	South	Nyaruguru
	West	Nyamagabe
Surface/square	581.5 km ²	
Number of sector	14	
Number of cells	77	
Number of Village	509	
Population	290,677	
Density	500 ha/Km2	

Table 8: Huye; Geography and administration

Source: Data from Huye DDP

Population

The table below shows, the distribution of the district of Huye per sector. Karama is highly populated with 11% of the total population of district. Gishamvu is less populated with 4% of the total population. Moreover, we can remark that in all sectors women are more than men.

Distribution of the population of Huye per sector

Sector	Total	Surface in km ²	Density per km ²	Male	Female	% Female
Mbazi	25 525	43	594	10 544	14 981	58,6
Kinazi	18 450	50,4	366	7 948	10 502	56,9
Simbi	22 876	31,9	717	10 822	12 054	52,7
Maraba	22 595	47,8	473	10 942	11 653	51,6
Rwaniro	21 290	54,4	391	9 814	11 476	53,9
Rusatira	27 017	51,3	527	13 464	13 553	50,2
Huye	19 392	31,6	613	8 508	10 884	56,1
Gishamvu	11 955	30,2	396	5 185	6 770	56,6
Mukura	15 963	32	499	7 332	8 631	54,1
Ruhashya	18 156	56,4	322	7 960	10 196	56,1
Tumba	23 666	18,7	1264	11 033	12 633	53,4
Kigoma	18 557	59,3	313	8 477	10 080	54,3
Ngoma	13 465	20,7	650	5 558	7 907	58,7
Karama	31 770	53,7	592	13 446	18 324	57,7
TOTAL	290 677	581,5	500	131 033	159 644	

Table 9: Distribution of the population of Huye per sector

Source; Data produced by sector (June 2007)

Different facts contribute to the increase of vulnerability in the district of Huye including the Genocide of 1994, endemic and pandemics like HIV/AIDS and extreme poverty. Most of the vulnerable people have no land and no shelters. In brief, the district is populated with 290677 inhabitants with 7033 orphans, 12543 widows, 4120 physical challenged, 4623 old people and 14119 people live in extreme poverty and the sector of have a high rate of vulnerability of 26% of its population.

The table below shows the number of vulnerable people per group and sector.

Number of vulnerable per category and per sector of Huye District

Sector	Total Population	Orphan	widows	Physical disables	Old people	People living in extreme poverty	Total of vulnerable	% of vulnerability
Mbazi	25.525	230	761	273	404	277	1.945	7,6
Kinazi	18.450	885	1.051	234	892	1.804	4.866	26,4
Simbi	22.876	424	715	404	424	1.355	3.322	14,5
Maraba	22.595	566	1.410	368	702	1.152	4.198	18,6
Rwaniro	21.290	495	1.177	231	166	474	2.543	11,9
Rusatira	27.017	347	985	249	211	3.716	5.508	20,4
Huye	19.392	521	1.207	270	237	295	2.530	13,0
Gishamvu	11.955	355	728	130	156	584	1.953	16,3
Mukura	15.963	298	64	503	254	1.954	3.073	19,3
Ruhashya	18.156	430	990	302	223	611	2.556	14,1
Tumba	23.666	679	1.276	86	192	176	2.409	10,2
Kigoma	18.557	529	955	346	448	810	3.088	16,6
Ngoma	13.465	988	517	492	76	235	2.308	17,1
Karama	31.770	286	707	232	238	676	2.139	6,7
TOTAL	290.677	7.033	12.543	4.120	4.623	14.119	42.438	14,6

Table 10: Number of vulnerable per category and per sector of Huye district

Source: DDP Huye (June 2007)

Rural and urban population

26% of population lives in urban area hence 74% lives in rural area and the main activities in rural area are husbandry, agriculture and handcraft works. (DDP of Huye District, July 2007).

Forests

The forests cover 3.558 ha which represent 6% of all surfaces. As you can observe it on the map, the forestation of Huye district is trivial compared to Nyamagabe or Nyaruguru districs (see maps in appendix). Huye does not have natural forest reserves like Nyamagabe and Nyaruguru district. Those forests are classified according to their owners as follows:

- Government forest : 1.953 ha;
- District forest: 1.155 ha ;
- Forest of privates : 450 ha

There is also an Arboretum of 220 ha which is not only a forest reserve but also a botanic park.

Energy

Households of the district of Huye use at 92% firewood and charcoal as the source of energy for cooking and kerosene at the level of 54% as their source of lighting. The use of electricity is concentrated in urban and per urban regions. The district counts a total of 27 high schools, 2 higher institutions of learning and many collective households which consume a large number of m3 of firewood. The district produces also fired bricks. In spite of the high consumption of biomass, there are no improved techniques which save firewood, of charcoal and bricks production.

The use improved stoves at the household level goes up to $90\%^9$. But information is subjected to verifications because, a part from mobilization of local authorities about the use of improved stoves and the support given by the army on improved stove making, there no systematic follow-up for implementation.

Measures taken to reduce tree cutting

The most forests were destroyed during the 1994 genocide/war and little after in the period of insurgence.

In other to protect some remaining forest reserves the District decided not to cut district and Government forests.

Measures to control tree cutting have been taken from the level of *umudugudu* including the instauration of tree cutting and transportation permits.

There is no tree cutting permits needed for cutting of tree for household use as it is in Gisagara district. When the cutting is for business purposes, a tree cutting permit is given by the sector authorities when the forest is less than 1 hectare, and when the forest is more than one hectare, a tree cutting is offered by district agent in charge of environment on the basis of the report provided by the agronomist of the sector. This report includes the status of the forest and confirms if it appropriate to be cut.

Authorities intend to introduce supplementary measures like the obligation for every person who need tree cutting permit to plant first a number of trees.

Apart from those administrative requirements, the deliverance of tree cutting and transportation is subjected to the payment of a "*petente*" of *Rwfr* 20,000 per year, *Rwfr* 5,000 for district and *Rwfr* 2,000 which is deposited in the National forestry fund.

Needs and Challenges for reduction of tree cutting

As it is shown above, Huye district is among districts which are most populated with a density of 500ha/km². The high density does reduce surfaces which can be used to plant more trees and increases the consumption of firewood. A part from the need of authorities of reforesting more than 3.558 hectares, household have to plant more trees around houses in order to increase the supply of firewood and protect environment. Mobilization, introduction and follow-up of techniques which save firewood for cooking, charcoal and bricks production have to be done.

IV.3 NYAMAGABE DISTRICT¹⁰

Geography, administration

Nyamagabe district is located in the south-west of the southern province and has 17 sectors namely: Buruhukiro,Cyanika, Gasaka, Gatare, Kaduha, Kamegeri, Kibirizi, Kibumbe, Kitabi, Mbazi, Mugano, Musebeya, Mushubi, Nkomane, Tare, Uwinkingi, 92 cells and 536 villages. The district is bordered by Karongi and Ruhango districts in the North, Nyanza and Huye districts in East, Nyaruguru at the South, Rusizi and Nyamasheke in the West.

Population, vulnerability and poverty

⁹ Information received from Infrastructure Director on April 28, 2008

¹⁰ Most Information of this section were received from Environment and natural resource offer in Nyamagabe district and the in PDD Nyamagabe (June, 2007)

The district of Nyamagabe has 317,766 people and 55% of them are females. The population aged fewer than 15 represents 35 % of the total population. The youth of 15 up 34 years represent 35.6% of the total population. The 35 up 69 years old stand for 25% of the total population of the district. **Distribution of the population of Nyamagabe per sector**

Sector	total	Male	female	% female
	317 766	142 975	174 791	55,0%
BURUHUKIRO	20 881	9 376	11 505	55,1%
CYANIKA	21 049	9 747	11 302	53,7%
GASAKA	23 710	10 878	12 832	54,1%
GATARE	16 211	7 686	8 525	52,6%
KADUHA	19 985	9 316	10 669	53,4%
KAMEGERI	15 289	6 055	9 234	60,4%
KIBIRIZI	20 547	10 270	10 277	50,0%
KIBUMBWE	12 595	5 399	7 196	57,1%
KITABI	24 361	10 284	14 077	57,8%
MBAZI	11 909	4901	7 008	58,8%
MUGANO	19 949	7 790	12 159	61,0%
MUSANGE	17 465	7 930	9 535	54,6%
MUSEBEYA	18 510	8 555	9 955	53,8%
MUSHUBI	14 432	7 100	7 332	50,8%
NKOMANE	17 181	8 062	9 119	53,1%
TARE	19 187	9 177	10 010	52,2%
UWINKINGI	24 505	10 449	14 056	57,4%

Table 11: Distribution of the population of Nyamagabe District per sector

Source: District of Nyamagabe. Census 2007

The district of Nyamagabe counts 8000 genocide survivors, with 828 survivors without shelters, 883 survivors with houses which are in deplorable situation, 329 orphan-survivors, 353 widows and 477 old people. The district counts 215 street children, 1795 households headed by OVCY.

5484 Households are living in extreme poverty. Local authorities encourage the creation of associations and cooperatives in order to capitalize the support they receive to create and sustain new income generating activities.

Forest and energy supply

The natural park of Nyungwe covers 91138 ha including 44,900 ha located in Nyamagabe district. A part from Nyungwe natural forest, Nyamagabe has 12 314.16 ha of artificial forests

More than 94.2 % of households use firewood and charcoal as source of energy for cooking. Only 1, 8% of the population is connected to ELECTROGAZ grid. Like in other 3 districts of project intervention area, the use of improved stoves goes up to 65% according to authorities. Even if there is no statistics on charcoal supply per district, the district of Nyamagabe is among the first charcoal suppler of the whole country. Nevertheless, there are neither improved techniques which save wood nor organized charcoal producers and charcoal collection and selling centers.

- Disseminating in partnership with PAFOR improved to all households during the year 2008, more than 15,000 improved stoves have to be distributed;
- Encourage bricks producer to introduce improved techniques which reduce firewood used;
- To mobilize households to use improved stoves and to support them in installation;
- With the support of the PAFOR, to plant more trees;
- Instauration of tree cutting and transportation permit.

As it explained by the agent in charge of natural resources and environment, to get a tree cutting permit following conditions have to be fulfilled;

For the forest less than 1 h, the permission of tree cutting is given to the level of sector and requires;

- The approval of the village responsible and witnesses who confirm that the forest is your property;
- The Approval of the cells coordinator and
- Visit of agronomist who gives advices and permission for cutting.

For the forest more than 1ha

A part from those tree first steps, the demand of cutting is addressed to the district and the agent in charge of natural resources and environment has to visit the forest and give his/her approval for cutting. The tree cutting permit costs Rwfr 10,000. In addition Rwfr 2,000 is paid and transferred to the National forestry fund.

Tree products transport permit cost Rwfr 20,000 and Rwfr 2,000 which is deposited in the national forestry fund.

Needs and Challenges for reduction of tree cutting

- Strategy of follow-up has to assure their proper use of distributed stoves;
- Introduction of improved charcoal production which save energy;
- Organization of charcoal producer;
- More than 1600 ha have to be reforested.

IV.4 NYARUGURU DISTRICT¹¹

Geography, administration

Nyaruguru district is located in southern province and boarded in the West with western province and the Republic of Burundi, in East with the district of Huye, in North there are Nyamagabe and Huye districts and in its South there is the Republic of Burundi. Nyaruguru district covers a surface of 1,010 km². Nyaruguru district is subdivided into 14 sectors, 72 cells and 332 imidugudu.

Population and poverty

Its population is estimated at 268,392 people among them 147,868 are women and represent 55.1% and 120,524 are men and represent 44.9%.

The population in Nyaruguru District, May 2007

¹¹ Information received from Environment and natural resource offer in Nyaruguru district and the PDD Nyaruguru

Sector	Population			Households
	Male	Female	Total	
Busanza	13 786	14 070	27 856	4 643
Cyahinda	8 950	10 557	19 507	3 251
Kibeho	7 476	11 306	18 782	3 130
Kivu	7 435	8 906	16 341	2 724
Mata	5 825	6 309	12 134	2 022
Muganza	9 991	12 715	22 706	3 784
Munini	6 376	7 755	13 131	2 189
Ngera	9 668	11 840	21 507	3 585
Ngoma	9 595	11 296	20 891	3 482
Nyabimata	6 677	10 637	17 314	2 886
Nyagisozi	7 730	9 448	17 178	2 863
Ruheru	10 828	13 843	24 671	4 112
Ruramba	6 988	9 220	16 208	2 701
Rusenge	9 199	9 967	19 166	3 194
Total	120 524	147 868	268 392	44 732

Table 12: population of Nyaruguru District, May 2007

Source: Statistics of Administration Unit and Good Governance of the district

This district faces a serious problem of vulnerability. More than 64,030 persons are vulnerable, including survivors of genocide, homeless people, orphans, old people, widows, physical disables, street children and others.

Energy and Forestation

Nyaruguru distric faces a serious problem of energy, only 2 centers of Ruramba and Mata are connected to ELETROGAZ grid. Within those centers only 22 households use electricity. Health centers, schools, and administrative offices use either generators or solar as their source of energy for lighting and use of machines. The main source of energy within this district is firewood. In some areas plant residual or firewood are used as the source energy for cooking and lighting.

Apart from Nyungwe forest, Nyaruguru district has 8,283 ha of planted forests made up especially by eucalyptus. 2,250 ha belong to public domains while 6,033 ha are the property of private people. 1,153 ha need to be reforested, whereas 221 ha have been deforested. 12,069 ha need to be reforested and the district is partnering with the PAFOR in reforestation.

The district counts 7 agri-business cooperatives and 915 associations which gather 16,759 members among of them, 9,642 are women.

Measures taken to reduce tree cutting

Charcoal and timber production make up the main sources of income of Nyaruguru district. The Overexploitation of forest pushes authorities to stop temporary its production and selling at the whole territory of the district except the zone alongside Nyungwe calle "*Zone Tempon*". Trees are cut in that region for plants renovation reasons. According to the environment and natural resources agent, this cut short measure intend not only to limit damages related to the overexploitation of the forests but also to give them the time to study and set up appropriate and sustainable measure of management and control of tree cutting.

As Nyamagabe district, Nyaruguru is among the firsts charcoal and timber supplier of the whole country. Despite this, there are neither organized charcoal or timber producer nor charcoal collection and selling center. The production and the selling activities are disorganized. The disorganization, the lack of information and unavailability and cost of tree cutting, charcoal production and transportation permits pull down the price of a bag of charcoal. There are a strong need of organization of charcoal producer, the suppleness in deliverance of tree cutting, charcoal and transportation of timbers and charcoal permit.

IV.5 PERCEPTION OF LOCAL AUTHORITIES ON CARE PROJECTS

The search team met in April and later May 2008 with local authorities in charge of Natural resource, environment and development of the 4 targeted districts. Each expressed their satisfaction of existing CARE's projects especially POWER project which improve the socio-economic conditions of the population saving and loan groups.

They expressed a positive view towards CASE project and suggested that it should help in the following activities;

- Tree plantation(reforestation) and establishment of more tree nurseries;
- Mobilization and sensitization of the population on the improved stoves usage;
- Distribution of more improved stoves to the poorest population;
- Establishment of community follow-up of improved stove usage;
- Training of the community m on improved stove making;
- Introduction of improved carbonization techniques;
- Introduction of improved brick ovens;
- Organization and education on environment protection of charcoal producers;

The list of interviewed local authorities is in appendix 5

The results of this baseline are the summary of information collected from households, focus group discussions with community based organizations, contacts with key stakeholders of CASE project including local authorities, local NGOs, local community. In some cases, information were collected from observation of the facts on the ground.

V. 1 HOUSEHOLDS INTERVIEWED

813 interviews have been carried out to collect information for the baseline study of CASE project from poor households of one sector considered as rural and another sector considered as peri-urban of the districts of Nyamagabe, Nyaruguru, Gisagara and Huye.

1. Sectors interviewed

Districts	Sectors	Sectors						
Districts	Rural	Per-urban						
Gisagara	Mugombwa	Save						
Huye	Maraba	Ngoma						
Nyamagabe	Gasaka	Nkomane						
Nyaruguru	Ruheru	Kibeho						

Table 13: Sectors interviewed

Source: Primary data

Based on project target beneficiaries, 9 categories of interviewees were established;

- 1. Vulnerable women (VW); Mostly composed by CARE beneficiaries of other projects operating in the area;
- 2. Orphan Vulnerable children and youth(OVCY);
- 3. Charcoal producers(CP);
- 4. Stove makers(SM);
- 5. Vulnerable Woman and Charcoal Maker(VW&CM);
- 6. Orphan Vulnerable Child and youth and charcoal maker;
- 7. Vulnerable Woman and stove maker(VW&SM);
- 8. Orphan vulnerable child and youth and stove maker;
- 9. Others; this category include all other vulnerable households which could be targeted by CASE project.

In the framework of this study, interviewed people are considered as potential beneficiaries of the CASE project.

As it is shown in the table below, 813 interviews have been conducted to different categories. 78.72% of them are female and 21.27% are male. Among female, 41.8% are household's head of family.

2. Interviewee disaggregated by category and sex

Catagony	Sex of interv	Total	
Category	Female	Male	TOLAT
Vulnerable Woman(VW)	332	18	350
Orphan Vulnerable Child and Youth (OVCY)	17	23	40
Charcoal Maker (CM)	7	18	25
Stove maker(SM)	5	5	10
Vulnerable Woman and Charcoal Maker(VW&CM)	2	0	2
Orphan Vulnerable Child and youth and charcoal maker	0	1	1
Vulnerable Woman and stove maker(VW&SM)	0	1	1
Orphan vulnerable child and youth and stove maker	7	4	11
Others	270	103	373
Total	640	173	813

Table 14: Interviewees disaggregated by category and sex

Source: Primary data

Female interviewed can be subdivided in two main categories depending on the membership in a village Savings and Loans Groups (VSLGs)¹² supported by CARE. 54.06% of female are members of VSLGs, 45% combine non-members of VSLGs and female OVCYs.

Out of 813 interviewed households, only 50 households are involved charcoal production with traditional techniques and improved stoves making business. This means that at least one of household members is involved in those activities. 9 are involved in charcoal production and selling whereas 5 are involved in improved stove making.

- 3. Household profile
- a) Size of the household





In the 813 household interviewed, the average number of household members is 6. The distribution of household sizes is shown in Chart opposite.

Source: Primary data

b) Age of interviewee(beneficiaries of the project)

¹² The VSLGs (80% of which are women) have been established in the target area through CARE's Community-Based Micro-Finance Programme funded by IFAD, USAID and NORAD since 2000. The programme continues in the South, East and North. They are engaged in small income-generating projects. There are altogether 5,000 VSLGs but 500 will be targeted as the direct beneficiaries.

The average age of interviewee (beneficiaries) is 40 years and all of in the range of the population considered as active population¹³.



Chart 3: Age of interviewee

Source: Primary data

c) Education of beneficiaries by categories

Cotogony of the interviewee	Inter	viewee's edu	ication					
Category of the interviewee	ND	Without	Alphabe	Primary	Seco	Vocation	Univer	Total
		education	tized		ndary	al College	sity	
Vulnerable Woman(VW)	3	145	107	84	3	7	0	349
Orphan Vulnerable Child and								
Youth (OVCY)	0	8	10	10	10	2	1	41
Charcoal Maker (CM)	0	3	11	10	1	0	0	25
Stove maker(SM)	0	4	5	1	0	0	0	10
Vulnerable Woman and								
Charcoal Maker(VW&CM)	0	1	1	0	0	0	0	2
Orphan Vulnerable Child and								
youth and charcoal maker	0	0	1	0	0	0	0	1
Vulnerable Woman and stove	0	0	0	0	0	1	0	1
maker (VW&SM)								
Orphan vulnerable child and	0	2	4	5	0	0	0	11
youth and stove maker								
Others	2	118	138	100	9	5	1	373
Total	5	281	277	210	23	15	2	813

Table 15: Education of beneficiaries per category

Source: Primary data

34.56% of interviewed people are not alphabetized, 34.07% are alphabetized, 25.83% had attended primary school, 2.71% have a secondary school level and 1.85% has attended vocational college. Only 2 people have attended university.

d) Trainings on improved stove making and charcoal production

¹³ According to the definition given by general census of the population of 2002 the active population is aged between 15 and 64 years

Only 2.091% of interviewed household have participated in the training on improved stoves making. Those trainings are mainly conducted by government institutions and NGOs.

The table below shows the number of households which has benefited the training as well as their initiator.

Training on improved stoves making participation by category and their initiator

Training on improved stoves making par	ticipatio	on	97.91%	not trained	1	2.091% Trained	
Initiator of training	Not train	GoR	NGOs	Churche s	Pr or	ivate ganization or	Total
Category trained	ed			-	со	ompany	
Vulnerable Woman(VW)	346	3	0	1	0		350
Orphan Vulnerable Child and Youth (OVCY)	40	0	0	0	0		40
Charcoal Maker (CM)	22	2	0	0	1		25
Stove maker(SM)	8	2	0	0	0		10
Vulnerable Woman and Charcoal Maker(VW&CM)	2	0	0	0	0		2
Orphan Vulnerable Child and youth and charcoal maker	1	0	0	0	0		1
Vulnerable Woman and stove maker(VW&SM)	1	0	0	0	0		1
Orphan vulnerable child and youth and stove maker	11	0	0	0	0		11
Others	365	6	2	0	0		373
Total	796	13	2	1	1		813

Table 16: Training on improved stove making

Source: Primary data

Table 17: Training of trainers on improved stoves making

Training of Trainers on improved stoves making participation 98.15% Not trained Only 1.845% Trained		Training of Trainers on improved stoves making participation	98.15% Not trained	Only 1.845% Trained
---	--	--	--------------------	---------------------

Initiator of training	Not	Gvt	Ν	Community	Chur	Private	Oth	Gvt&	Total
Category trained	trained		G	organization	ches	organization or	ers	NGO	
		-	-			company	-		
Vulnerable Woman(VW)	342	0	5	1	1	1	0	0	350
Orphan Vulnerable Child and	40	0	0	0	0	0	0	0	40
Youth (OVCY)									
Charcoal Maker (CM)	25	0	0	0	0	0	0	0	25
Stove maker(SM)	10	0	0	0	0	0	0	0	10
Vulnerable Woman and	2	0	0	0	0	0	0	0	2
Charcoal Maker(VW&CM)									
Orphan Vulnerable Child and	1	0	0	0	0	0	0	0	1
youth and charcoal maker									
Vulnerable Woman and stove	1	0	0	0	0	0	0	0	1
maker(VW&SM)									
Orphan vulnerable child and	11	0	0	0	0	0	0	0	11
youth and stove maker									
Others	366	2	1	0	0	1	1	2	373
Total	798	2	6	1	1	2	1	2	813

Source: Primary data

People who have received the training of trainers on improved stoves making are nearly the same as those who are trained on improved stoves making. The difference is made up by two people (17-15). By comparing two tables above, it can be seen that government institutions are more involved in improved making training rather than trainings of trainers on improved stoves.

Training on Income generating activitie	es						
	NT	GoR's Institutions	NGO	Churches	Private organization or company	GoR's& CBO	Total
Vulnerable Woman(VW)	328	5	13	3	1	0	350
Orphan Vulnerable Child and Youth							
(OVCY)	35	2	1	1	1	0	40
Charcoal Maker (CM)	24	0	1	0	0	0	25
Stove maker(SM)	9	1	0	0	0	0	10
Vulnerable Woman and Charcoal							
Maker(VW&CM)	2	0	0	0	0	0	2
Orphan Vulnerable Child and youth							
and charcoal maker	1	0	0	0	0	0	1
Vulnerable Woman and stove							
maker(VW&SM)	1	0	0	0	0	0	1
Orphan vulnerable child and youth							
and stove maker	11	0	0	0	0	0	11
Others	344	10	15	2	1	1	373
Total	755	18	30	6	3	1	813

Table 18: Training on income generating activities

Source: Primary data

Only 7.13% are trained on income generating activities *V.2 HOUSING AND COOKING FACILITIES*

660 (81.2%) of 813 respondents have their own houses and 10% rent the shelter, 4.4% live in extend family houses. As it is shown in the table below, vulnerable woman and OVCY are the most categories which suffer from the problem of shelter. Among 81 households that rent the shelter, 59.2% are Venerable women and OVCYs.

a) Family house ownership

Table 19: Family house ownership

	House own	er				
Category	Her/his property	Extend family property	Renting	Friend	Other	Total
Vulnerable Woman(VW)	270	20	39	12	8	349
Orphan Vulnerable Child and Youth						
(OVCY)	32	3	4	0	2	41
Charcoal Maker (CM)	22	1	1	0	1	25
Stove maker(SM)	10	0	0	0	0	10
Vulnerable Woman and Charcoal						
Maker(VW&CM)	2	0	0	0	0	2
Orphan Vulnerable Child and youth						
and charcoal maker	1	0	0	0	0	1
Vulnerable Woman and stove						
maker(VW&SM)	1	0	0	0	0	1
Orphan vulnerable child and youth						
and stove maker	6	0	4	1	0	11
Others	316	12	33	4	8	373
Total	660	36	81	17	19	813

Source: Primary data

b) Number of rooms of the house interviewed household



Chart 4: Number of rooms

Source: Primary data

The average number of rooms of the household's houses is 4.

d) House building materials

Most of those houses are made up of mud and wattle as walls and tiles for roof.

House building materials: walls							
	Ν		813				
		Percen		House building materials: walls			
		tage of	number				
	Materials	HHs	of HHs	Percentage of HHs			
1	Fire mud						
	bricks	2.5	20	80.071.2			
2	Brick in			70.0			
	cement	0.6	5	50.0			
3	Unfired			40.0 30.0 <u>22.9</u> 20.0			
	mud bricks	22.9	186				
4	Mud and			10.0 2.5 C.6 0.1 1.6 0.1 0.2 0.7			
	wattle	71.2	579				
5	Stones	0.1	1	Fire nut brids entert brids wate stones others 2.3 2.4 3.4			
6	Others	1.6	13				
7	2,3	0.1	1				
8	2,4	0.2	2				
9	3,4	0.7	6				
	Total	100	813				

Chart 5: House building materials

Source: Primary data

Chart 6; House building materials: roof

House building materials: roof							
	N		813				
	Percentag Materials e of HHs		number of HHs	HHs			
1	Tiles	70.5	573	80.0 - 70.5			
2	Iron sheets	18.1	147	70.0			
3	Plastic sheeting	0.5	4				
4	Straw	8.6	70	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
5	Others	0.4	3				
6	Tiles and iron sheets	0.9	7				
7	Tiles and plastic sheeting	0.1	1				
8	Tiles and straw	0.9	7	Way & J Or			
9	Iron sheets and						
	straw	0.1	1				

Source: Primary data

8.6% of respondent households use straws to cover their houses as it is shown by the graph above.

e) Cooking place

More than a half of households (437 \blacktriangleright n=813) cook in the kitchen and 38.5% in one of house's room and 4.9% cook in the courtyard.



Chart 7: Cooking place

Source: Primary data

f) Current stage of improved stove usage

As it can be shown in the table and chart below, only 392 (48.2 %) of 813 households use improved stoves at 100%, 41.2% do not use them and 10.6% use them at different levels.



Chart 8: Number of households currently using improved stoves

Source: Primary data

Current stage of improved stove usage per sector




Sectors like Gasaka and Ngoma considered as urban sectors use improved stoves less than any other sectors surveyed. Households that using improved stoves represent 25.9% and 35% of all surveyed households. The use of improved stove in Mugombwa and Maraba considered as rural are the highest users of improved stoves at the level of 68.4% and 54.3%. As it is shown on the chart opposite, the level of usage of improved stoves in sectors alongside Nyungwe forest (Ruheru and Nkomane) goes up to 46.7% and 46.9% whereas sectors like Kibeho and Save use improved stove at the level 47.2% and 52.7%.

Source: Primary data

g) Improved stoves introduced/used in the project area

In the district of Gisagara, Huye, Nyamagabe and Nyaruguru, local authorities have mobilized the population on the importance of improved stoves usage to reduce fuel wood for cooking.

77% of 813 respondents confirm that they are recommended by local authorities to use improved stoves in general without differentiation, 12.7% are recommended to use round mud stove, 3.7% ISAE stoves and 1.4% to use rocket stove

Two main types have been introduced; fixed and movable stoves. Households used them depending on area (rural and per-urban), their size, needs for cooking, row material existing in the region, fuel used as well as cost for acquiring.

A good number of movable improved stoves are made up with metal and clay and utilize charcoal as fuel. Six categories of them, used most the time in urban and per-urban areas, can be found on the Huye or Nyamagabe markets at the cost which varies between Rwfr 500 and 2500.

Fixed improved stove can be found in the most cases in rural areas and built for free to the rural poor population. The population had to provide raw materials available in the region and local authorities offered technical support. In some areas, a limited number of the community members were trained on improved stove making but in the most cases it is the Rwanda Defense Force (National Army) which built improved stove. Among fixed improved stove 4 types are mostly introduced and the most popular/used are round mud stove which is made with mud, bricks and clay.

Photos of those different types of (fixed and movable) improved stoves can be found in appendix 7.

h) Partners in improved stove making

Districts were supported by the Rwanda Defense Force (National army) in disseminating improved stoves. The second partner is the PAFOR. According to local authorities PAFOR will support Nyaruguru and Nyamagabe districts to install more improved stoves so that each household gets at least one.

i) Problems and challenges of usage of improved stove

The usage of improved stoves accounted constraints and problems including;

• Lack of technical support for reparation and maintenance

Damaged stoves are not repaired or replaced because there are not sufficient trained people to make, maintain and repair them;

• The performance of introduced improved stoves

In some areas, they use traditional and improved stoves at the same time because it takes much time to improved stoves to get hot compared to traditional. The reason why in some cases people use improved stoves when they have to prepare several types of the meals or cook food which takes much time to get ready like beans; barbecues;

• Eating, cooking and hitting habits

Tree stones stoves are used to roast maize or heating in some areas especially those alongside the Nyngwe forest;

• Mobilization and sensitization/motivation;

In some cases, the community does not know the role and the impact of usage of improved stove. Some people can say *"that is the stove of executive secretary of the sector"*. This expresses the need of additional well structured mobilization and sensitization campaigns in order to increase the ownership of the community of improved stoves;

• Inappropriate stoves for each region

The study should take into consideration the quality and materials available in the region. This will not only make easy the installation and maintenance but also reduce the price in order to make improved stove available even to those who live in extreme poverty;

• Follow-up/monitoring strategy

There are no strategies of follow-up of the programme of improved stove dissemination in the project target areas.

V.3 ENERGY DEMAND AND SUPPLY

a) Energy use

Out of 813 households surveyed 771, i.e., 95% use firewood as the main source of energy for cooking, 45 (5%) use charcoal at 100% for cooking and 16 households use both firewood and charcoal. In some areas vegetables and plant residues are used for cooking and lighting. 40% households use Kerosene as the source of energy for lighting. Batteries are used both for lighting and entertainment (radio) by 33% households.

b) Cooking energy supply

1. Source of cooking energy

Given the prevail use of firewood and charcoal as cooking energy, the following analysis focuses only on those two sources energy.

As it is shown in charts below 85% users of traditional stoves do not pay their firewood whereas 71% of households using improved stoves collect them.

Supply of firewood

Supply of firewood used in traditional stoves Collected&Bought____Supply of Firewood used in improved stoves on the shop on the Market others, 1% hop, 1% Bought on the others market, 5% 7% Bought on the market -9% Purchased Delivered, 3% Collected Delivered Collected 4% 85% 71%

Chart 1: Supply of firewood

Source: Primary data

Most of the time (beyond 95%), it is the womwen and children who are responsible for fecthing firewood. The collection of firewood is not controlled and this leads to destruction of young trees and forests.

Charcoal supply

Chart 2: Charcoal supply

As it is shown in the chart opposite only 3.3% HHs produces for them the charcoal they consume. Charcoal is mostly used in urban and per-urban sectors like NGoma and Gasaka.

According to charcoal producers interviewed, one stere (350kg) produces 8 bags of 25kg. This means that to obtain 1kg of charcoal 1.75kg of eucalyptus tree have to be carbonized.



Source: Primary data

2. Time used for cooking and collecting firewood

11hours and 54 minutes are spent per week to collect/buy firewood by those households which use tradition stoves at 100% while only 7 hours and 8 minutes are spent by those households which use improved stoves. More than 95% cases surveyed, women and children are responsible of fetching firewood for in the household; either those households use improved or traditional stove. The time saved by households which use improved stoves should be used for productive activities improving living conditions of families. Those activities include housework, farming, income generation activities, etc. Children can use this time to revise their studies and do their homework.

The amount of time used for cooking all meals is a dependent of the stove, the household size (number) and composition (age, occupation,...), eating habits, income, responsible, availability of food for cooking, etc.. In the present report, only tree variables have been taken into consideration; the stove used; the size of the household and eating habits. It has been found that in the household that uses improved stoves at the level of 100% lives in average 5 persons whereas in the one which uses traditional stove at 100% lives on average 4 persons. Beans considered as a most firewood consuming food are cooked two times in the household with improved stove rather than those which use traditional one in the surveyed project area. After combining all those variables, it has been found that household using improved stoves spends 130 minutes whereas it takes 226 minutes to cook all the meals for a household with traditional stoves. The time saved equals to 96 minutes or 1 hour thirty six minutes.

The supplementary 1 hour and half can be used for other productive activities which improved the household living standard. It also reduced firewood used and offset the emission of the carbon dioxide.

3. Quantity used per week

¹⁴ (GTZ) GmbH (German Technical Cooperation), Household Energy Programme – HERA; Economic evaluation of the improved household cooking stove dissemination programme in Uganda; Dissemination of the Rocket Lorena stove in the districts of Bushenyi and Rakai and dissemination of the improved charcoal stove in Kampala in the years 2005 and 2006

The firewood consumption for households using the traditional as well as improved stove varies over the course of a year and from one location to another. Crop residues, vegetable and dung are also used in various quantities as additional cooking energy. Furthermore, the size of household, local eating and cooking habits as well as firewood scarcity influence the amount of firewood consumed.

In addition, numerous other factors which influence the firewood consumption of the individual household, such as the size of the family, its income, its living standard, the firewood price, the available supply of firewood, the dryness/humidity content of the wood and the varieties of wood used.

In deriving the average firewood consumption per month, all the above-mentioned factors were considered as well as the fact that on average, some households also use both the three-stone stove fire and improved stove, but only to a very small extent.

A household which uses the improved stove consumes 9 bundles and 0.146397 steres per month. It is assumed that 1 bundle weights in average 15kg and one stere weights 350 kg; this means that they consume in total 187 kg of firewood per month. For those which use traditional stoves, the quantities consumed are 14.1 bundles and 0.27 steres which equal 308 kg of firewood per month.

As it is mentioned above, the mean household size came to 6 persons in the surveyed regions. As the consumption per month per households for those which use improved stove is 187 kg, the per capita consumption of firewood per day is equal to 1kg per day (187/30 days/6 persons). Thus, each member of household using traditional stoves consumes 1.7 kg firewood per day on average which is amounted to 10.2kg for the whole household.

The total amount of firewood saved per month due to the use of improved stoves comes to 121 kg per household which represent 39.28%.

For those households using charcoal, the consumption per month goes up to 2bags of 35 kg each and most of them are located in per urban and using charcoal saving stove (namely local clay stove and oval stoves; *see their photos in appendix 7*).

4. The cost of energy

In the past, firewood was considered as a "free" good which is available in random supply. But now firewood is like any other source of energy which is economically costly. 60% of 813 respondents consider that firewood is either expensive or hard to obtain. The scarcity is confirmed by the increase of firewood selling activities even in the rural areas. Based on the market prices in the surveyed area, 1 bundle of firewood of 15 Kg costs in average Rwfr 700, the price of 1 stere(\approx 350Kg) of wood is Rwf 7,000 and a bag of 50kg is sold to Rwfr 3,000. This means that a household has to pay an average Rwfr 33 to obtain 1 kg of firewood and Rfw 100 to get 1 kg of Charcoal.

Household using traditional stove which does not have time/place to collected firewood has to pay Rwfr 336.6 (10.2kgxRwfr33) per day. The total monthly cost is estimated to Rwfr 10,098.

The cost for those households which use improved stove is amounted to Rwfr 198(6kgxRwfr33) per day. The monthly total cost is estimated to Rwfr 5,940. That means that household using improved stove can save Rwfr 4,158 per month and Rwfr 49,896 annually.

That money can be used to pay annual Health mutuality (Rwf 6,000/year) for a household of 6 six persons, to buy school materials (exercise books, books, pens, etc...) for children, to start small businesses as well as deposit in Microcredit institutions to get a loan for business start. The use of traditional stove reduces US\$ 25cent¹⁵ of the household income per day.

 Table 20 : Impact of the use of improved stoves on time, income and quantity of firewood used

 Impact of the use of improved stoves on time, income and quantity of firewood used

¹⁵ Exchange rate USD1=Rwfr550

	Three stone stove	Improved stoves	Saved by those HHs which use improved stoves
Quantity of Firewood used per month	308 kg	187kg	121kg (39.2%)
Time used to collect firewood per week	11h54'	07h8'	4h46' (40.0%)
Time used to cook per day	3h46'	2h10'	1h36' (42.4%)
Money paid for firewood per month	Rwfr 10,098	Rwfr 5,940	4158 (41.1%)

Source: Primary data

5. Impact of the use of improved stoves on indoor pollution reduction

Apart from direct monetary cost of firewood, the use of tree stones open stove intensifies ecological (deforestation), environment degradation and health threats.

It uses not only a significant quantity of firewood but also produce harmful smoke and greenhouse gases (carbon dioxide (CO_2), carbon monoxide, methane, etc.). All those gasses contribute further to the global warming and smoke is the cause of several respiratory illnesses, Cancer, prenatal outcomes and birth weight and eye diseases. According to the World Health Organization (WHO), levels of harmful pollutants released by indoor biomass burning are often 10-20 times higher than the recommended upper limits of exposure established by the same organization¹⁶.

Even if time and available materials did not allow determining exactly the existing carbon emission at the household level, the level of carbon emission can be observed on the roof and wall of kitchen/house. Roof and walls of kitchens and houses using three stones stoves have became blacker than those which use improved stoves. This is due to the carbon emission by three stones in all directions. More than 96% of interviewed households are not aware of threats of indoor air pollution on health.

Women and children less than 5 are the most vulnerable categories threatened by indoor smoke inhalation. 75% cases found, it is the woman who is responsible for cooking and has to spend on average 1 hour and 44 minute cooking and in some cases with a baby on her back.

As it shown in the table below, 164 of 813 households which represent 20.17% are highly threatened by indoor smoke inhalation because they cook not only with tree stones stoves but also in the one of rooms of the house they live in.

Households using traditional stoves highly threatened by indoor smoke inhalation

	Cooking	g place					
Stove Used by households	In the kitchen	In the courtyard	In the room	Other	In the kitchen& In the room	In the courtyard& In the room	Total
Improved	255	12	153	7	1	0	428
Traditional	183	27	160	10	3	1	385
Total	438	39	313	17	4	2	813

Table 21: Households using traditional stoves highly threatened by indoor smoke inhalation

Source: Primary data

6. Household Satisfaction of energy supply

 $^{^{\}rm 16}$ WHO: The health effects of indoor air pollution exposure in developing countries 2002

94% assume that the supply of energy is less enough for their diary needs of energy.



Chart 3: Satisfaction of energy supply

Source: Primary data

7. Tree plantation

Only 58% households 0f 813 has planted at least one tree during 2007. The average number of trees planted is 18. More than 70% of tree planted are agroforetory trees. 43% of those plantations are initiated households themeselves and 42% have been motivated by local auhorities.

Chart 4: Initiator of tree plantation around the house



Initiator of the plantation of trees around house

Source: Primary data



Most (64.6%) households planted trees from local administration and government institutions nurseries. 20.8% planted tree from their own nurseries. NGOs and community based organization have offered plants respectively to 3.9 and 2.6% interviewed households as it can be seen in the table opposite

Source: Primary data

Chart 6: Support needed to plant more trees



Source: Primary data

Support needed to plant more plant

The surveyed sectors have the high densely populated and in Save sector (rural areas) it goes up to 628ha/km². That is why 29.5% among those households which want to plant trees expressed the need to get more space for planting. 15% want to get training on preparation of improved agroforestory plant nurseries. Agroforstory trees are prefered by 22.2% in order to protect environment and assure food security.

V.4 EATING AND COOKING HABITS

1. How many times HH cook per day?

How many times do HH cook per day? four Didn't times respond , 0.1 , 2.5 Three times, 16.1 Once, 30.1

Chart 7: How many times do households cook per day?

Household firewood consumption is highly related to the times cooked per day. More than a half (51%) of interviewed household cook twice a day and 30% cook once a day. 16% cook three times a day and 2.5% four times.

Source: Primary data

Twice, 51.0

2. How many times all members eat per day?



Chart 8: How many times all do household members eat per day

Even if 51% of 813 households cook twice a day, 64% of them eat per day. This means that more than 13% of household don't eat hot meal each day. There are several factors which can explain that reality including the scarcity of firewood. Some households prefer to reduce times cooked per day in order to save firewood or because they do not have at all firewood especially in rainy season or for vulnerable people who can neither collect nor buy them.

Source: Primary data

V.5 AVERAGE INCOME IN LAST 3 YEARS AND INCOME GENERATING ACTIVITY

Table 22: Income of interviewee			Chart 9: Interviewee income			
Number of	ber of interviewee who are living with the income			0.9%, Up to Rwfr Annual interviewee Income		
	Less than 198,000	Up to 396.000	Up to 1,200,000	Up to 3,000,000	Beyond 3,000,000	3,000,00 0.1%, Reyon 5.4%, Up to Rwfr 1,200,00 3,000,000
(VW)	296	48	4	2	0	16.2%
(OVCY)	28	10	2	0	0	, Less than Bwfr
(CP)	16	1	5	3	0	396,00
(SM)	7	3	0	0	0	
(VW&CM)	2	0	0	0	0	
OVCY&CP	0	1	0	0	0	77.4%
(VW&SM)	1	0	0	0	0	Less than
OVCY&SM	8	3	0	0	0	KWT198,000
Others	271	66	33	2	1	
Total	629	132	44	7	1	

1. Income of interviewees

Source: Primary data

77. 4 % interviewed people earn less than Rwfr 198,000 per year. Among vulnerable women 296 of 350 interviewed live with the income less than 198,000. With an exchange rate of Rwfr 550 = US\$1 which means that they live with less than US\$ 1 per day. As it is shown on the chart below the second category which also lives in extreme poverty is other. As it is explained at the beginning of this chapter, this category is mainly composed by other households which are not current CARE projects beneficiaries. They represent 43% of all people living with less than US\$ 1.



Chart 109: Interviewee income per category

Source: Primary data

2. Average annual income of the household over the last 3 years (in Rwfr) per sector

	Average annual i	ncome of the	household	over the last	t 3 years(in R	wfr) per sector	
		Less than	Up to	Up to	Up to	Beyond	Total
		198,000	396.000	1,200,000	3,000,000	3,000,000	
	GASAKA*	38	13	3	0	0	54
	KIBEHO*	95	10	1	0	0	106
	MARABA**	95	13	6	3	1	118
Soctor	MUGOMBWA**	77	26	12	2	0	117
Jector	NGOMA*	118	30	7	1	0	156
	NKOMANE**	61	14	6	0	0	81
	RUHERU**	71	14	6	1	0	92
	SAVE*	74	12	3	0	0	89
Total		629	132	44	7	1	813

Table 23: Average of annual income per sector

*considered as urban/per-urban Source: Primary data **considered as rural

Chart 11: interviewee income per sector



3. Income generating activity

89% of interviewed people of the sector of Kibeho live less than US\$1 per day. As it is shown in the chart opposite, Kibeho is followed by Save which is also considered as a perurban sector.





Source: Primary data

38% household's income is provided by farming activities. Businesses and jobs provide to the household per year Rwfr38, 358 and Rwfr 31,533. Handcrafts making and other activities contribute to the income on the average of Rwfr 14,459 and Rwfr 16,572. The average annual income generated by those activities is Rwfr 185,509.

4. Improved stove making

As it can be seen on the chart above, improved stove making activities represents 2% of the household's income. That can be explained by two main reasons;

- Household members are not trained on improved stove making (see point V.1.c);
- Household members are not informed/organized/motivated and trained to transform improved stoves making an income generating activity.

In the project area, well organized improved stove community makers are almost inexistent. Nevertheless, some associations and CARE's Village Loans and savings Groups are engaged in improved stove making businesses. This is the case of a CARE's VSLG of Ngoma (Huye District) and KORA association of Huye.

5. Charcoal production activities

Charcoal production requires significant monetary investments to buy firewood and pay for tree cutting permit (*See the costs tree cutting permit in each district in chap.4*). Most charcoal producer of surveyed area work for those who have the means to buy wood or who want to cut their own forests. In additional charcoal producers are not organized as it is in other sector such us agriculture. However in some areas charcoal producers have started to organize themselves in order improve their activities.

This is the case of "TWITEZE IMBERE TURENGERA IBIDUKIKIJE"- meaning let us promote our development while protecting the environment, producing and selling cooperative of Kinazi sector,

district Huye made of 9 women and 6 men. The cooperative has already a saving account, a land to build a charcoal collection and selling center and has applied for official registration. In Nyaruguru district, there was some charcoal collection and selling centers built on the support of CARE. Information received from local population confirms that those centers were destroyed during the periods of insurgence and insecurity post war.

V.6 ANNUALL HOUSEHOLD EXPENSES IN LAST 3 YEARS



Chart 12: Household expenses

Source: Primary data

Annual average household expenses in last 3 years goes up to Rwfr 159,270. Food represents 41% of the total expenses. 10% is spent respectively to Education and agriculture. Health, cooking energy and lighting energy take 5% each of the whole amount of Household. Water costs to the household 4% of its income. The total expenses for all types of energy goes to (5% of cooking +5%+2% for entertainment) =12%. This means for the household, energy is the second priority after eating and before health, education, water, etc.

V.7 SAVINGS AND LOANS

360 out of 813 household interviewed has saving account and at least one household member of 253 has received a loan. The use of the loan received by the household member is shown in the table below;



Chart 13: Use of the loan

27.3% of 253 households have used the money they receive in business activities. 18.2% contracted loan for agriculture improvement and 15.4% to acquire household equipments.

Source: Primary data

V.8 FUTURE PROJECTS; WILLINGNESS TO START IMPROVED STOVE MAKING



Chart 14: Willingness to start improved stove making and charcoal production business

Source: Primary data

69.7% of 813 respondents desire to start improved stove making and only 50.7% to start or improve charcoal production with improved techniques.

As it is shown in the table below, all (413) of those who want to start charcoal business are ready to contract a loan to invest in that business. 163 (39.4 (39.4%) of 413 are vulnerable women of CARE's village loan and savings groups while 60.6 % (250) are not.

Interviewees ready to contract a loan for starting charcoal business (with carbonization improved techniques) per category.

Are you ready to contract a loan to start Charcoal production (with improved techniques) business?				
Category of the head of Household	undecided	Yes	No	Total
Vulnerable Woman(VW)	12	163	175	350
Orphan Vulnerable Child and Youth (OVCY)	1	20	19	40
Charcoal Maker (CM)	1	20	4	25
Stove maker(SM)	0	9	1	10
Vulnerable Woman and Charcoal Maker(VW&CM)	0	2	0	2
Orphan Vulnerable Child and youth and charcoal maker	0	1	0	1
Vulnerable Woman and stove maker(VW&SM)	0	1	0	1
Orphan vulnerable child and youth and stove maker	1	8	2	11
Others	17	189	167	373
Total	32	413	368	813

Table 24: Willingness to contract a loan for charcoal business

Source: Primary data

CONCLUSION

The increase of demand of firewood for cooking appears to be a major environmental and economic problem not only in the surveyed districts but also in the whole country at the micro and macro levels. The use of tree stones open stoves and traditional charcoal production contribute significantly to increase

of quantity of firewood for cooking and producing charcoal. The most affected are women and children who are responsible for collecting firewood and cooking. This takes time which can be used for other productive activities for women and education for children. In additional the exposure of the women and her child while cooking is the cause of respiratory, eye diseases and in some cases cancels.

95% households use only firewood as the main source and 5% use charcoal for cooking. Vegetables and plant residues are used for cooking and lighting in some areas. The collection of firewood is not controlled and this leads to destruction of young tree and forests.

Only 58% households has planted at least one tree during the year 2007 and 18 trees were planted on average per each. In addition, the project target area is the one of the most populated area with the density which goes up to 622 h/km^2 in rural areas and suffer from deforestation of mountains with the slope above $40\%^{17}$.

During this study, it has been found that local authorities have motivated and supported household to get and use improved stove as a way of firewood saving.

At least six types of movable improved stoves and 4 types of fixed improved stoves were introduced/ used in the project target area. Households which currently use of improved stove represent 48% of the population. Improved stoves were built by/with the support of local authorities. Apart from some business associations located in towns, community members do not have the technology of making, maintenance and repair improved stoves. The lack of trained community members on improved stove making is the first threat of the sustainable usage of improved stoves. Others threats of improved stoves usage which identified include; lack of mobilization, follow-up, cooking, eating and heating habits, etc.

Households using improved stoves have seen the quantity of firewood used get reduced of 39.2% form 308 kg to 187kg per month. Households with improved stove cook 1h36' less than those which still using traditional stoves per day. The cost of firewood per month was reduced of 41.1% for those households which use improved stove and pay for firewood.

In spite that the project target area can be considered as the one of potential supplier of charcoal at the country level, the charcoal production sector is informal and not organized. In additional, that sector is threatened by the cost and the administrative requirements to get tree cutting and transportation permit. Due to those administrative requirements and lack of sufficient investment, most of charcoal producers work clandestinely. This leads to young tree cutting and usage of non-appropriate techniques and place of carbonization. Furthermore, charcoal produced clandestinely is sold to unreasonable price to speculators who come from Kigali of others big cities of the country.

RECOMMENDATIONS

Based on the resultants of the baseline study following recommendation have to be taken into consideration for the success of CASE project;

¹⁷ Mountains with 40% of slope are inappropriate for cultivation because they are vulnerable to the erosion

i. To promote the use of improved stoves and improved charcoal production techniques

The promotion has not only to include firewood saving impact of improved stoves but also their benefits to reduce indoor air pollution and its harmful effect on health and to offset the emission of carbon dioxide (CO₂) and gasses which contribute to the global warming. Based on existing tools of mobilization on environment protections, specific module including all negative impacts of using tree stones open stove has to be produced.

ii. Trainings

As local leaders with other partners have strongly invested in dissemination of improved stoves in the project area, CASE project have to put emphasis on trainings (for trainers and improved stove makers). At least one person per "*umudugudu*" has to receive a training of trainers. The content of this training has to include both techniques of improved stoves making and environmental, ecological and health impact of the use of improved stoves. Those people will then train other member of the community on improved stove making. People trained on improved stoves will help not only to make new improved stoves according to the community needs, but also to repair and to maintain those which are destroyed. The activity of repairing and making new improved stoves will generate more income to the households.

iii. To carry out an advanced study on appropriate improved stove considering quantity of wood saved, cooking habits, row materials for improved stove making available for in each regional as well as the income for each household;

iv. To structure and empower charcoal production sector;

This includes,

- To organize charcoal producer into cooperative and help them to fulfill administrative requirements and link them microcredit's institutions;
- To introduce improved techniques of carbonization which save firewood and train charcoal produce on those techniques;
- To train them on managerial development skills and basic accounting
- To train them on environment impact of deforestation and support them to plant more trees;
- To build charcoal collection centers in the project areas and to establish selling centers in main cities like Nyamagabe, Huye and Kigali; this will reduce the cost of charcoal because producer will be directly in contact will the user;
- To promote the involvement of women in charcoal production business;
- To involve charcoal producers in tree planting act ivies;

v. To plant more trees

A stress has to be put in the mobilization of planting trees around the house. This has to be conducted at the same time with establishment of tree nurseries made up especially by agro-forestry trees.

Huye and Gisagara are the districts which have a strong need in tree plantation. Apart from the support of the government there is no other partner in tree plantation. In additional those districts are the most consumers of firewood and charcoal in terms of density.

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APPENDIX

CASE Project Baseline study Report

APPENDIX 1: REVISED LOGICAL FRAMEWORK

	Intervention logic	Objectively verifiable Indicators of achievement	Baseline data
Overall Objectives	1. Improve access to modern and affordable energy services and sources for poor rural		
	and peri-urban households in Southern Rwanda while ensuring environmental	The % of people accepting/using newly introduced improved	To be collected during implementation
	sustainability (contributing to MDG 7);	Viable system for production, distribution and repair of improved stoves established in the 4 districts	0
		Increased # of people (disaggregated by sex) exclusively using improved stoves (at 100%)	392 of 813HHs (48.2%)
		At least 2 members per targeted VSL group able to make and	No VSLG has 2 trained people (Of
		repair stoves with appropriate technology	813 surveyed HHs, 15 (1.845%) have
			received a 101% 17 (2.091%) training on improved stove making)
		Level of contribution to increment of fuel reserve (impact on	The average number of trees
		stocks for fuel wood through tree planting, use of energy	planted per year is 18. The average
		saving stoves and cooking techniques)	quantity saved by HHs in target area is 58.34 kg per month.
		Increased # of people aware of importance of sustainable	0
		natural resource management	
		# of actions taken by local authorities to support project	4 (tree cutting limitation, planting
		initiatives (follow up, sharing infos, community mobilization	trees, mobilization on usage of
		ect)	improved stoves and their
			dissemination)
	2. Improve the social and economic well-	Increased # of people (disaggregated by sex) eating twice a	(% of HHs) 64% eat twice per day
	being of the target groups by providing them	day	
	an opportunity to engage in income-	Decreased # of people (disaggregated by sex) affected by	20.17% are affected by indoor
	generating activities related to affordable	smoke related diseases.	smoke inhalation

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-	Baseline

	energy services (contributing to MGD 1).	Increased # of people (disaggregated by sex) able to meet basic needs (referring to MINALOC poverty categories)	22.6% live with more than 1 \$ per day
		# of people participating in social and economic development programmes initiated in their communities	25%
Specific Objective	Reduce by 50% the gap between biomass energy supply and demand for 24,000 poor	Reduced # of tons of biomass per year needed by the target group	Average of 2.9 tons a year per HH
	rural and peri-urban households in the districts of Nyamagabe, Nyaruguru, Gisagara	Increased # of people (disaggregated by sex) eating at least one hot meals per day	81.10%
		Cumulative amount of energy cost saved by the HHs over 3 years;	To be collected during the implementation(the average cost of energy per month is Rwfr 8000)
		% of time saved for the target group (disaggregated by sex and age) for collecting firewood;	9h31'(Time used per week for collecting firewood both for traditional & improved stove users)
		# Of trees planted annually by the target HHs around their homes.	18
		# of HH linked with relevant institutions for tree plantations	79.20%
		# New HHs opting to use improved stoves.	To be collected during implementation
Expected Results	ER1: At least 16,000 rural HHs and 8,000 peri- urban HHs use improved stoves and save at	# of HHs trained to make the improved charcoal stoves.	1.845% received a TOT& 2.091% attended training on Stove Making
	least one ton of biomass per household per annum.	# of HHs using & maintain appropriate and affordable energy saving stoves and energy saving cooking methods/techniques,	(HHs) 48.2%
		# of appropriate stoves types selected and accepted and used by the target HHs	To be collected during implementation
		Quality control mechanisms for stove production, use and maintenance in place and working	No mechanism

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	# of the target HHs acquiring improved stoves;	48.20%
	# of tons of biomass saved annually per HH	0.7 per year
ER2: 100 charcoal producers save 50% of wood by using improved carbonization techniques.	# Of people (disaggregated by sex) acquiring skills and knowledge in improved charcoal making using environment friendly and efficient techniques.	0
	# of 50kg bags of charcoal made by using improved carbonization techniques and sold monthly;	0
	# of tones of biomass reduced by using improved carbonization techniques	0
ER3: 6,000 vulnerable women, 300 OVCYs and 100 charcoal producers make and sell	# of vulnerable women involved in the process of production and selling of improved stoves	0
their products, thus raising their income by at least 40%.	# of OVCY (disaggregated by sex and by age) involved in making and selling improved stoves	O
	# of charcoal producers (disaggregated by sex and by age) involved in making and selling improved charcoal	O
	# of Vulnerable women, OVCY and charcoal producers reporting quarterly about their increased income	0
	# of improved stoves made and sold per month	0
	# of HHs reporting monthly increased income;	0
	# of women reporting monthly increased income due to charcoal production	0
	<pre># or % of HHs earning income from selling improved stoves and charcoal;</pre>	0
	Cumulative amount saved quarterly by each target group after selling improved stoves	0

APPENDIX 2: PROFILE OF HOUSEHOLDS THAT COULD BE TARGETED BY THE PROJECT AND CRITERIA FOR SELECTING THEM.

Households that could be targeted by CASE project must be rural or per-urban poor ones as it is described by the *ubudehe* survey¹⁸. They have to be among those households which suffer most from the shortage of energy for cooking or using significant quantity of firewood due to its size. To make easy their organization, most of them should be members of existing CARE's village loan and saving group. CASE should first target sector, then village loan and saving group in each sector. Among member of each village loan and saving group, direct beneficiaries (household) will be selected.

Criteria	Description
Level of poverty	 As vision 2020 sectors are considered as the poorest sector, the project should first target them;
Willingness of local authorities/ suggestion of local authorities	 The project must target sectors in collaboration and freewill of local authorities taking into consideration their priorities;
Availability/accessibility to cooking energy and firewood	 For improved stove makers, an attention has to be taken to sector which express higher shortage of firewood; For charcoal producer, an attention has to be taken to the sector which have enough wood for charcoal production; As the natural forest is threatened by charcoal production and collection of firewood for cooking, the project should target sectors alongside Nyungwe forest in order to limit its destruction.
Population	 The project should first target sector with a high population density; Sectors with high number of vulnerable; Sectors where charcoal production activities are significant and considered as the generating activities.
Willingness of women and OVCY to start/ improve improved stove making or charcoal	 Sectors with a large number of vulnerable women/OVCY who are interested in improved stove making and charcoal production should be prioritized

Criteria of selection of sectors to be targeted by the project

¹⁸ According to the *Ubudehe* survey, seven socioeconomic poor categories were identified. These are, destitute, poorest, poorer, poor, vulnerable, surviving and others. Vulnerable people were identified in order of greatest destitution, as widows, landless, ill, the elderly and child-headed households.

Criteria of selection of a VSLG

Criteria	Description
Location	 Must be located in selected project target sectors
willingness	 Willingness to participate in improved stove making and charcoal production.
Methodology "intambwe"	 A VSLG must use Loan and saving methodology "intambwe" properly; Have some savings on the account:
	 Income earned per day
	• Categories of poor as sorted out by <i>ubudehe survey</i> (see the introduction)
Participation of women	 70% members must be vulnerable women or OVCY;
	• 70% of its committee member must be women with key position;
Usage of improved stoves	• Level of dissemination and use of improved stove in the sector as
	it is;
	 A VSLG must have a significant number of its members who do not use improved stoves.
Availability of firewood in the region	• A VSLG must be in the region which faces a shortage of firewood;
Dissemination of improved	• Level of dissemination and use of improved stove in the sector as
stove in the regional and	it is;
Availability of firewood for	• The support could focus on communities, sector and districts
cooking	which mostly faces the lack firewood.
Size of the households	• The consumption of firewood depends on the size of the
	household and the large families must be prioritized to get the support to get improved stove.

Criteria of selection of household (member)

Criteria	Description		
Participation in VSLG	 A priority have to be given to members of VSLG; 		
Willingness to start	• A household has to express interest to start improved stove		
improved stove making	making businesses		
activities	Interest to acquire new technologies for improved stove making		
	or management and marketing skills to increase production		
	and/or services delivery efficiency.		
	•		
Degree of vulnerability	 Income earned per day less than \$1 		
	 Categories of poor as sorted out above 		
Head of household	• The head of household should be a vulnerable woman of an OVCY		
	or		
	The most vulnerable of the VSLG		
Access to energy for	Availability of firewood;		
cooking/and improved	 Financial means to pay the cost of energy 		
stove	• Evidence of strong effective demand for improved stoves making,		
	repair and maintenance at the community, sector levels		
	•		
Size of the households	A priority has to be given to large size households;		
	• The category of household's members (children and adults) has to		

	be taken into consideration because households with large number of children tend to cook more time for example which leads to increase use of firewood
Eating and cooking habits	• Eating and cooking habits have to be taken into consideration because in some meals need to be cooked for long time other are not. This has a significant impact on the firewood demand at the level of the household.
Entrepreneurship mind of head of household	 Willingness to work in association and invest in improved stove making; Transparency of relationships with micro-enterprises (i.e., clarity of responsibilities through contracts/written terms and consistency of enforcement, etc.). Have a saving account Commitment and willingness to save a portion of its income for further expansion.

Criteria of selection of people for training of trainers on improved making

Criteria	Description
Participation in VSLG	 A priority have to be given to members of VSLG;
Willingness to start improved stove activities	 An individual has to express interest to participate in improved stove making activities;
Ability to learn and transfer the technology	Participant must know to read and writing.
Availability/physical ability	 Participant has to be available for the training period and to train others; Have physical ability to train and travel.
Sex/ categories/age	• 75% of participant have to be vulnerable women or OVCY;
	• For OVCY, they should have between 15-35 years

Criteria of selection of charcoal producers

Criteria of selection

Criteria	Description		
Participation in a	• All charcoal producers have to be members of a VSLG/Association or		
VSLG/Association and	cooperative		
cooperative			
willingness to	• Evidence of strong willingness to start/improve charcoal production		
start/improve charcoal	with improved techniques businesses		
production business	• The association has to prove that they have ready market for charcoal		
	but are unable to meet demand.		
	• Association must be ready to abandon charcoal production with		
	traditional techniques and be ready to introduce new techniques;		
	• Interest to acquire new technologies of charcoal production. or		
	management and marketing skills to increase production and/or		
	services delivery efficiency.		
Availability of firewood	• The availability of firewood must be taken into consideration and a		
in the sector/regional	priority has to be given to sector which have enough wood for charcoal		
	production.		
Ownership of	 Association members must be charcoal producer themselves. 		
association (sex	• Association members must be at least 50% vulnerable women/ OVCY		

/category), Number of association members.	 Association members must demonstrate potential for increases in the number of association members that can participate and benefit from the activities.
Availability/physical ability	 Association members have to be available/able to exercise charcoal production as viable income activity Have physical ability to produce and to sell charcoal.
Potential For Achieving Competitiveness	 Potential for technologies, management systems, or marketing efforts to increase the supply of charcoal. Ready to compete on the national market of charcoal.
Opportunities For Linkages	 Potential forward/backward linkages within the community and the regional; Large buyers looking for more efficient ways to engage association as a source of supply.
District or stakeholders Interest / Existing Support Programs	 Positive district interest in charcoal production business (i.e., limited interventionist policies, subsidies, potential for positive linkages with government services, and favorable policies). Existing programs which promote charcoal production with improved techniques that can provide synergy and complementary activities.
Upgrading Potential	 Potential for existing association to upgrade their products and production techniques. Potential for association to deliver higher value added to improved charcoal production;
Potential for Broader and Deeper Increases in Income and Wealth Creation	 Potential for increasing revenues for the association as well as those of the households. Potential for increasing incomes and wealth in the short, medium, and longer terms.
Potential For Employment Generation	 Potential for association to create new employment opportunities as the charcoal production with improved techniques develops or expands.

APPENDIX 3: TECHNICAL, ORGANIZATIONAL AND MANAGERIAL CAPACITY OF CITT AND ADENYA AND ACTIONS FOR FURTHER CAPACITY BUILDING TO THEM

A) ADENYA

1. IDENTITY

. Organization name Association pour le Développement de Nyabir		
	ADENYA asbl	
Organization Type (Please Select):	€ Academia	
	€ Development Agency (Bilateral or Multilateral)	
	€ Foundation	
	€ Government	
	X Non-Governmental Organization (NGO)	
	€ Private Business	
	€ Individual	
2. Organization Email Address	adenya@adenya.org	
3. Organization Website:	www.adenya.org	
4. Telephone:	(+250) 0942 19 11/(+250)0856 40 89	
5. Fax:	-	
6. Address (city/district/ province:	Secteur Nyabimata, district Nyaruguru	
7. Contact person 1; Name (Last, First):	Firmin MUTABAZI	
8. Position at organization	President	
9. Telephone:	(+250) 0842 19 11	
10. Email Address:	<u>Firmin mutabazi@yahoo.fr</u>	
11. Contact person 2; Name (Last, First):	Gabriel NKULIYIMANA,	
12. Position at organization	Coordinator	
13. Telephone:	(+250) 0856 40 89	
14. Email Address: gabynku@yahoo.fr		
15. Date Established	1983	
16. Does the organization has a legal ADENYA is registered as asbl since Decemb		
personality ?(registration, visible, etc)	See ministerial decree nr 678/07 of December 1 st , 1983	
17. Special niche (a place not quite filled by other organizations) in the development of the communit		
ADENYA intervenes in rural landlocked areas whe	ere other NGO don't reach	

2. VISION, MISSION, GOAL, OBJECTIVES, VALUES AND STRATEGIES

1. VISION (in brief):			
Have rural area with adequate basic infrastructures and a population with capacity			
2. MISSION (in brief):			
To help rural populations alleviate poverty, fight against ignorance, squalor and social injustice.			
3. GOAL (in brief):no			
OBJECTIVES (in brief)			
Fight against poverty			
Food reliance			
Strengthen community financial capacities			
4. Is there a system and Indicators for monitoring and evaluation of objective? Yes No€			
VALUES (in brief)			
Participation			

- Hospitality
- Qualitative results
- Openness
- Participation
- Friendliness (see ADENYA brochure).

STRATEGIES (in brief)

ADENYA is working with local/community organization and gender balance is taken into consideration by;

- Giving the same opportunities to men and women in its intervention
- Sensitizing of the population around the common action
- Promoting the emergence of solidarity groups/associations
- Supporting associations to get solutions on common problem
- Follow-up field activities

5.	Is there any system of gathering information at	Information are gathered with data collection
	the beginning of the activities? Yes No€ <i>if yes</i>	tools by field staff , analyzed and filed.
	provide supporting document (reference).	
6.	Gathered information from monitoring is used	YesENo€
	by (project) managers for decision making?	
7.	If yes how?	Data are used for reviews, id and final evaluations
8.	Are there effective participatory monitoring	ADENYA members participate in monitoring and
	and evaluation system in use? Yes No€ if yes	evaluation but few cases include beneficiaries
	provide supporting document (reference).	

3. PERSONNEL CAPACITY

Exp	Expla	nato	ory notes								
1.	Yes There struct Chart,	No€ is ure , wri	if yes pro an appr with role tten role	ovide s opriat es/ ex s and	supporting e, function pectations responsibili	docu al a clea ties	ument (ref and writte rly define in interna	fer en d: I <i>Ri</i>	ence) used. organizatio Organizatio PG	on on	
2.	How many employees work for	35									
	the institution? Total Number										
3.	What is the level of education of	Univ	9	Secon	20	Vocatio	6	Alpha		No	
	employees? Number per level	ersit		dary		nal		betize		educati	
		у				training:		d		on	
4.	Are human resources adequate to	carry c	out t	he organ	izatior	nal objective	es?				
•	In numbers		Not adequate								
•	In skills		Not adequate								
•	Is gender balance taken into consideration	Yes									
•	Are skills qualification matching with job requirements	No									
5. Co	What type of technical assistanc resources and why? In numbers	e do th In skills	ne ii S e ir	nstitutior 1 matchin	n need ng skill	l to improv s qualificati	ve tl on v	ne capacit vith job re	qu	of its huma irements	an

- In member: there is a need of a training professional, maternal health expert and tourism agent
- In skills: there is a need of training on accounting and data management software

6.	Specify the area(s) of improvemen	t			
•	Vocational training				
•	Workshop facilitation				
Fo	r new staff				
•	Projects cycle management,				
•	Project and report design				
•	Maternal health				
7.	Are there systems/ procedures	Yes No€if yes provide supporting document(reference)			
	through which staff members	(See Règles et procédures de gestion + staff files			
	are hired and fired?				
8.	Is there orientation/ induction	Yes Nolif yes how does it work: The system is not there but they			
	system of new staff?	plan to introduce it for future new comers. Otherwise the had			
		just a one day meeting to talk about new staff tasks.			
9.	Are there incentives/ motivation	Yes No€if Yes Which ones? If not why?			
	for employees?	Some including Professional seniority, project and performance			
		allowances, health insurance			

4. ADMINISTRATIVE CAPACITY

Ex	planatory notes	Explanatory notes
1.	Is there a guideline for administrative	Yes No€ if yes provide supporting
	matters/ office procedures? E.g. applying for	document/reference
	annual/ sick/ maternity leave, use of facilities	All those guideline is included in Règles et
	and equipment, do's and don'ts etc.	procédures de gestion.
2.	Is there a simple and well organized filing	Yes No€if yes What is the procedures
	system.	But no sufficient space.
3.	Are equipment and supplies recorded?	Yes No€if yes What is the procedures
4.	Is there inventory a system on time basis?	Yes No€ if yes is it done Dairy€ weekly€ monthly
		iquarterly €annually ?
5.	Are there appropriate procedures governing	Yes No€ if yes provide supporting
	transport, use of equipment, etc?	document/reference.
		There is for transport and not to other equipments
6.	Does the organization possess logistical	Yes No€if yes specify them
	infrastructure (e.g. stock) and equipment	Not sufficient
	(e.g.: car Moto, bicycle, etc)?	
7.	Does the organization have procurement	Yes No€ if yes provide supporting
	procedures and regulation	document/reference
		(See Règles et procédures de gestion)

5. FINANCIAL CAPACITY

Are	eas for assessment	Explanatory notes
1.	Does the organization have	Yes No€if yes provide supporting document/reference
	financial procedure and	(See Règles et procédures de gestion)
	regulation?	
2.	Is there a guideline for approval	Yes No€if yes provide supporting document/reference
	of financial transactions?	(See Règles et procédures de gestion)
3.	Are there guidelines for	Yes No€ if yes provide supporting document/reference: Manuel
	controlling expenditures, such as	de procedures de gestion (but needs content improvement and

	purchases?	up date)
4.	Does the organization have a	Yes No€if no Why?
	regular budget cycle?	-
		Since 2003 there is budget continuity
5.	What is your annually budget in	2005: Rwf 100 000 000, 2006: Rwfr 150 000 000,
	last 3 years?	2007: Rwfr 300 000 000
6.	Does the organization produce	YesENo€
	separate programme and	
	projects budget?	
7.	Are project budgets met up	There are most of the time significant over-spending / under-
	most of the time?	spending there is neither over/under-spending
		spending , there is herener over/under spending
8	What is the maximum amount	Rwfr 950 000 000 over 5 years and Rwfr 400 000 000 over 3
0.	of monoy that the organization	Kwii 950 000 000 00ei 5 years and Kwii 400 000 000 00ei 5
	managed2	years.
0	Deep the experimetion ensure	
9.	Does the organization ensure	Yes ∎No€IF yes now?
	physical security, cash and	The security of the Headquarters is assured by two guards and
	records?	the branch of Kibeno is guarded by the local defense force;
		The money is kept in banque populaire and the cash don't
		extend Rwfr150.000
		Checkbook is kept by the accountant
10.	Does the organization	YesENo€
	disburse/pay funds in a timely	
	and effective manner?	
11.	Does the organization have the	YesENo€
	ability to ensure proper financial	But no specific software for accounting
	recording and reporting?	
12.	Does the organization have a	Yes No€if no why?
	bank account with more than	The organization has a bank account with 3 signatories. Two
	one signatory?	signatories is obligatory for the amount above Rwfr 500 000
13.	Are there clear, written	Yes No€if yes provide supporting document/reference
	procedures/ guidelines for	Signatories are decided/appointed by the general assembly
	changing signatories?	
14.	Are financial reports prepared at	Yes€No if yes provide supporting document/reference
	least quarterly and circulated to	The Financial report is annually
	appropriate parties promptly?	
15.	Are financial reports used for	Yes€No if yes provide supporting document/reference
	planning and decision – making?	But annually
16.	Are external audits done at least	Yes No€ if yes provide supporting document/reference: 2006
	once a year?	audit report filed.
17.	Does the organization have an	Yes€No if no why?
	internal auditor	There is no financial means
18	Does the organization generally	Yes No€if no why?
10.	meet agreed donor financial	
	requirements?	
10	Is the bank reconciliation done?	Monthly © Quartarly € Annually Novar dana€
1 13.	is the bally reconclination dolle!	

6. GOVERNANCE AND MANAGEMENT CAPACITY

Areas for assessment		Explanatory notes			
1. Do managers have skills (from academic		Yes No€if yes how? If no why?			
	background and experience) in general				
	management? E.g. planning, organizing				
	directing control, etc.				
2.	Do senior staff is skilled in project	Yes No€if yes how? If no why?			
	design and proposal writing or financial				
	resource mobilization?				
3.	Do Staff/ members/ board have skills in	Yes No€if yes how? If no why?			
	monitoring and evaluation?				
4.	Project staff has skills in community	Yes No€if yes how? If no why?			
	organization/ mobilization?	But new staff doesn't have sensitization and mobilization			
		skills.			
5.	Does all staff have adequate	Yes€Notif yes how? If no why?			
	communication skills as required for				
6	the job?				
6.	Do all staff members have adequate	Yest Notif yes now? If no why?			
	foodback practiced and approxisted?	ther associated meetings			
7	Deep the person in charge of accounts (
/.	bookkeeping have adequate financial	res€notificiently skilled and no work experience. He			
	management skills?	ne is not sufficiently skilled and no work experience. He			
0	Are there in place Staff development	Vace Not if you have a why? The staff day demonstric			
0.	nolicies/ plans?	rese not in yes now in no why in the stan development is			
		the need and it is not easy to get money for that activity			
		The organization plans to set up the policies			
9	Are training	Ves $N_{0} \in if$ yes how? If no why? When it happens to have			
5.		session trainings the opportunities are equitably shared			
		and take into consideration department and gender.			
10.	Are there any systems which help the	Yes€No if yes specify them and if not why?			
	organization to keep informed about	Apart from small library and newspapers there no system			
	the latest techniques/ competencies/	to get information and the budget for documentation &			
	policies/ trends in its areas of	staff development is limited.			
	expertise?				
11.	Does the organization have access to	Yes No€if yes specify them and if not why?			
	relevant information/resources and	Through networking with other NGOs and government			
	experience?	institutions and other partner development organizations			
12.	Does the organization know how to get	Yes No€if yes how? If no why?			
	baseline data and how to develop	As we do not have internal expertise, at each project			
	indicators?	starting we hire an external consultant for gathering			
		database and with the staff, we develop indicators for			
		progress assessment. The organization plans to get SPSS			
	• ••• •••	software.			
13.	Does the organization apply effective	Yes No€if yes how? If no why?			
1	approaches to reach its targets (e.g.	Statt uses methods like PIPO, PRA, open space, etc to			
	participatory methods)?	reach their targets. In addition planning workshops are			
14. What/how is the organization presence		regulariy organized.			
		Explain priefly			

in the field? Intervention area, etc	Southern province but most activities are located in
	Nyaruguru District
15. What the capacity of organization to	Explain briefly
coordinate the field and office work?	Apart from headquarters located at Nyabimata, ADENYA
branches, field staff, etc	has a branch at Kibeho.

7. FINANCIAL RESOURCES AND SUSTAINABILITY

Are	as for assessment	Explanatory notes
1.	Is there any funding strategy?	 Yes€Not if Yes Which ones? If not why? No written strategy. Its funding strategy can be summarized in 5 points: Funding sources/donor diversification Decentralization and strengthening of branches and services; Starting income generating activities (investment in energy, accommodation, other company and in future in the tourism industry, etc).
2.	While looking for donors, does the organization approach them with a vision consistent with that of the organization?	Yes No€if Yes Which ones? If not why?
3.	Are there significant sources (Financial& material) of support from the community?	Yes No€if Yes Which ones? If not why? The community provides material support for the implementation of some projects/activities and/or rises fund to get fertilizes
4.	Is there evidence of organization's ability to mobilize local resources?	Yes No€if yes Which ones? If no why? Increase of Savings (to buy fertilizes, equipments, etc) of associations working with ADENYA
5.	Are the organization's key staffs involved in budget formulation?	YesENo€if yes how? If no why?
6.	Is the organization innovative and creative in its fundraising approaches?	 Yes No€if yes how? If no why? contacts and visits and project and marketing based on results to NGOS, Embassies and government institutions , there no
7.	Is the organization able to "make do" with what is available?	Yes No€if yes how? If no why? E.g. Use of motorcycles in the place of vehicle in order to reduce the cost of transport
8.	Are resources utilized and managed to give the greatest possible benefit.	Yes No€if yes how? If no why? Beneficiaries participate in the implementation of the project.

9. Does the organization have adequate/sufficient working/office space?	Yes€ Not specify number of offices/branches/trainings rooms/conference rooms and others compared to the need of the organization.
10. Is the equipment sufficient for at least the basic needs of the organization?	Yes€Notif no specify the need Lack of : 1 vehicle 4x4 ; 10 motorcycles ; 1 kit ARTEL (1 modem for antenna) for Internet connection; Lap tops ; Projector ; Solar papel
11. Does the available transport within the organization appropriate to the environment?	Yes€ if yes what is transportation means available in the organization Not if no specify why and needs Not sufficient, there is a need of 4x4 vehicle considering the field and its transportation infrastructure
12. Does the organization have activities of generating its own resources (other than donors)?	Yes No€if yes which ones? If no why? Lodges, secretariat public, investment in energy (société d'électrification rurale ENERGIE NYARUGURU SARL), in local microfinance (COOPEC local) and shares in the companies including MIG. In future, ADENYA plans to invest in tourism.
13. Does the organization have diversified/multiple sources of funding (not just one major donor)?	 Yes No€ If yes what are different donors of the organization? 1. Broederlijk Delen/ Belgique 2. rères des Hommes/France3. Government project /Global fund, FHI) 4. ONG including CARE 5. Belgium Embassy
	if no explain why

8. EXTERNAL RELATIONS AND NETWORKING

Are	eas for assessment	Explanatory notes
1.	Does the organization	Yes€ No€if yes which ones? <i>if no explain why</i>
	regularly/frequently take part in	ADENYA is funder and member of CCOAIB, member of
	network/collaborative efforts with other	PELUM, as well as member of the seeds producer
	organizations (gov't & NGO)	federation
2.	Does the organization have adequate	Yes <mark>€</mark> No€if yes which ones/how? <i>if no explain why</i>
	level of representation in relevant	
	professional associations/coalition?	ADENYA is representative of civil society in joint action
		forum of Nyaruguru district. Is also the representative of
		seeds producer in Rwanda.
3.	Is there adequate	Yes <mark>€</mark> No€ if yes how? <i>If no explain why?</i>
	collaborative/cooperation with the	ADENYA collaborates extensively with the Nyaruguru
	government (services, information,	Distric.
	policy development, etc).	
		ADENYA has received awards in 2006 from the

		government of Rwanda of the corporation which offers good services to the community and creates jobs.
4.	Is the organization aware of relevant	Yes No€if ves how? If no explain why?
	government plans and priorities in the	Through its participation in sector and district councils as
	area?	member. ADENYA Is aware of plan and priorities of
		aovernment in the area. In addition, it participate in
		implementation of agvernment policies especially
		trainings and mobilization of the community
		F g : it has to train during the month of July community
		on MDG vision 2020: EDPRS green revolution PSTA
5	Are government local	Ves $No \neq if ves how? If no explain why?$
5.	authorities/agencies/departments	
	influenced by the work of your	This can be proved by its influence in Join action of the
	organization?	Nyaruguru district and its participation different councils
	organization:	and task forces at the level of sectors and districts
		It is considered as a local leading development NGO in
		the rural area. It intervenes in agriculture health loans
		and savings activities onergy education atc
		and savings activities, energy, education, etc
6.	Do Members/staff/ board share the	Yes No€if ves how? If no explain why?
	organizational vision. mission.	 Trough meetings and workshop
	objectives, lessons with others through	By editing brochures
	various means (oral, written, exchange	 By cutting biocharcs By launching its website
	visits. etc.)	 Trough contact and visit
7	Is there a willingness and ability to learn	Ves $N_{0} \neq if$ yes how? If no explain why?
<i>.</i>	from other organizations and individuals	The staff learn from visits workshops in order to
	as signified by changes made after	improve the way they work and offer services
	exchange visits and other learning	
	forums?	
8.	Are partners for collaboration (especially	Yes No€if yes how? <i>If no explain why?</i>
	donor partners) selected on the basic of	
	shared values and those terms and	See Broederlijk delen, IMBARAGA, AMI, ADM, memo of
	conditions of collaboration are mutually	understanding
	discussed to the satisfaction of each	
	party?	
9.	Are External resources persons (from	Yes No€if yes how? <i>If no explain why</i> ?
	other organizations, government, etc)	
	involved appropriately?	
10.	Does the community (not just	Yes No€if yes how? <i>If no explain why</i> ?
	beneficiaries/members) have knowledge	Is recognize as the local NGO which works in rural-poor
	of the activities of the organization?	areas in different areas.
11.	Does the organization have credibility (is	Yes No€if yes how? <i>If no explain why?</i>
	trusted, respected) in the community at	For international and local NGOs, Government
	large.	institutions and other partners in development, consider
		ADENYA as the key partner of the development. Even
		local authorities promote the ADENYA's activities and
		participate in search for partners.

Are	eas for assessment	Explanatory notes
1.	Do vulnerable groups/disadvantaged (i.e. women,	Yes CNo€if yes how? <i>If no explain why?</i>
	OVCY, elderly, disabled, the poor) benefit from	
	the organization's activities?	E.g.: construction of houses for Batwa of
		Mishungero, construction of water tank for
		genocide survival of Muganza, alphabetization
		of vulnerable of Nyaruguru District.
2.	Is sustainability considered in all aspects of	Yes No€if yes how? <i>If no explain why</i> ?
	programming?	That is why ADENYA promote income
		generating activities in order to assure funding
		of its activities even when external funding
		becomes more scarce or stopped.
3.	Does the community have decision-making responsibility?	Yes No€if yes how? <i>If no explain why?</i>
4.	Are the communities involved in all phases of the	Yes No€if yes how? <i>If no explain why?</i>
	programme?	Especially in design/inception phase
5.	Do communities feel they "own" the	Yes No€if yes how? <i>If no explain why?</i>
	project/activities of the organization?	Their involvement in design of activities
		increase the ownership of the activities
6.	Do organization's activities meet felt needs of the	Yes <mark>€</mark> No€if yes how? <i>If no explain why?</i>
	communities?	The needs of the community are includes during
		the design.
7.	Are alternative strategies to address community	Yes <mark>€</mark> No€if yes how? <i>If no explain why?</i>
	needs adequately explored before intervention?	
8.	Is baseline information gathered & documented	Yes€No€ if yes how? <i>If no explain why?</i>
	through appropriate methods? There is adequate	ADENYA use participatory methods in baseline
	diagnosis of problem(s) prior to intervention.	study design but it doesn't have appropriate
		methods to document data including
_	Lethers adapted discussion of machines (a) mission	appropriate software.
9.	is there adequate diagnosis of problem(s) prior to	Yes No€ If yes which ones? If no explain why?
10	Are detailed implementation plans made with	Vos E No Eifvos how? If no ovalgin why?
10.	activity time tables?	The plan is also reviewed depending to
		nriorities and the needs
11.	Are implementation plans made with the	Yes $\leq No \leq if ves how? If no explain why?$
	involvement of all the stakeholders?	Especially at the beginning
12.	Are plans followed and used or revised	Yes \leq No \in if yes how? If no explain why?
	appropriately when carrying out activities?	
13.	Do organization monitors document and learn	Yes <mark>€</mark> No€if ves how? <i>If no explain whv?</i>
	from its experiences?	Midterm and final evaluation are made for
		each project
14.	Are skills needed to manage the project passed	Yes <mark>€</mark> No€if yes how? <i>If no explain why</i> ?
	on to the community?	
15.	Does the organization have means of tapping	Yes€No <mark>€</mark> if yes how? <i>If no explain why</i> ?
	skills & experiences available in the community?	
	e.g. use of wisdom and experience of community	No means
	elders, indigenous technical knowledge, and	
	community resource persons etc	
16.	Are there observable improvements in the lives of	Yes No€ if yes specify some, <i>If no explain</i>
	beneticiaries in the community as a result of the	why?
	organization's activities? Some examples	 4000 alphabetized people

a,		
	•	A health center in Nyabimata center
	•	Irish potatoes seeds production center

10. GENDER CONCERNS

Areas for assessment		Explanatory notes		
1.	Are members of the board of management adequately exposed and sensitized on gender concerns?	Yes <mark>€</mark> No€if yes how? <i>If no explain why?</i>		
2.	Are members of staff adequately sensitized and trained in gender analysis?	Yes <mark>€</mark> No€if yes how? <i>If no explain why?</i> But not all		
3.	Are communities, which the organization work with, adequately exposed and sensitized on gender concerns, which they reflect in their daily practice including leadership representation in their groups made up of the two sexes.	Yes No€if yes how? If no explain why? It can be observed in the participation of women in associations boards		
4.	Are there organizational gender policy to guide the operations and general practice of the organization?	Yes€ No€ if yes which ones (reference document)? If no explain why? There is no formal policy but only trainings on gender were carried out to the staff.		
5.	Is there adequate gender representation in the management structures of the organization, including the board and the staffing?	Yes€No€give number of male and female at each level Only 1 women out 5 members of management structure		
6.	Does fairly good number of women hold key positions within the organization?	Yes€ No if yes which ones (reference document)? If no explain why? Not yet.		
7.	Is there fair allocation of chances by gender for staff development and other human resource capacity building opportunities?	Yes€No€ if yes how? <i>If no explain why?</i> Because there is no significant number of women in project management		
8.	Is the organization involved in gender lobby movements within the District/province/ country/region?	Yes€No€ if yes how? If no explain why? Apart from the sensitization and mobilization of communities of Nyaruguru district on gender issues in the framework of PAGOR project		

II. STRENGTHS & WEAKNESSES TRACKING FROM ORGANIZATIONAL CAPACITY ASSESSMENT
Areas of strengths	s Strengths	
tracking		
Identity – Attitude		
Vision, mission, goal, objectives, values and strategies		
Personnel capacity	 There is a systems/ procedures through which staff members are hired and fired There are incentives/ motivation for employees including Professional seniority, project and performance allowances, health mutuality and others 	
Administrative capacity	 There is a guideline for administrative matters/ office procedures; There is an organized filing system; Equipments and supplies are recorded; Inventory is done on annually basis; The organization has procurement procedures and regulation. 	
Financial capacity	 The organization has financial procedure and regulation; There is a guideline for approval of financial transactions; There are guidelines for controlling expenditures, such as purchases. The organization has a regular budget cycle during last three; The organization ensures physical security, cash and records. The organization pays funds in a timely and effective manner; The organization has a bank account with three signatories; It is the general assembly which appoints/changes signatories. 	
Governance and management capacity	 Staff/ members/ board, not all, have skills in monitoring and evaluation; Some project staff has skills in community organization and mobilization; To reach its targets ADENYA uses participatory methods; Known as a local NGO working in rural area in the Southern province especially in Nyaruguru District. 	
Financial resources and sustainability	 Even if they are not written ADENYA has strategies of fundraising While looking for donors, ADENYA does approach them with its vision consistent; The community participate in funding ADENYA in some activities ADENYA has the ability to mobilize local(from the community) resources; this can be proven by the increase of savings of association/cooperatives supported by ADENYA ADENYA's key staffs is involved in budget formulation; The organization is able to "make do" with what is available In order to assure that resources are utilized and managed to give the greatest possible benefit, ADENYA use the planning based on results; 	
Material – Financial resources and sustainability	 The organization has diversified/multiple sources of funding (not just one major donor) 	
External relations and networking	 The organization does regularly/frequently take part in network/collaborative efforts with other organizations (gov't & NGO) There is adequate collaborative/ cooperation with the government 	

	(services, information, policy development, etc);
	• ADENYA is aware of relevant government plans and priorities in the area;
	• Government local authorities/ agencies/ departments are influenced by
	the work of ADENYA;
	• Members/staff/ board do share the organizational vision, mission,
	objectives, lessons with others through various means (oral, written,
	• In ADENIXA there is a willingness and ability to learn from other
	organizations and individuals as signified by changes made after exchange visits and other learning forums;
	• Partners for collaboration (especially donor partners) are selected on the basic of shared values and terms and conditions of collaboration are mutually discussed to the satisfaction of each party;
	• External resources persons (from other organizations, government, etc) are involved appropriately;
	• The community (not just beneficiaries/members) has knowledge of the activities of the organization and ADENYA has credibility (is trusted, respected) in the community at large;
Programme	• Vulnerable groups/disadvantaged (i.e. women, OVCY, elderly, disabled,
performance	the poor) do benefit from the organization's activities;
	• Sustainability is considered in all aspects of programming;
	• Even if the communities are not involved in all phases of the programme,
	they feel they "own" the project/activities of the organization;
	Organization's activities meet needs of the communities ;
	• ADENYA has detailed implementation plans made with activity time
	tables and plans are made with the involvement of all the stakeholders;
	• Plans are followed and used or revised appropriately when carrying out activities:
	 ADENYA monitors document and learn from its experiences:
	• There are observable improvements in the lives of beneficiaries in the
	community as a result of the ADENYA's activities.
Gender concerns	 Members of the board of management Are exposed and sensitized on
	gender concerns;
	ADENYA training communities of Nyaruguru district on gender issue

WEAKNESSES

Areas of	Weaknesses	
weaknesses		
tracking		
Identity – Attitude	Identity is limitative s the intervention area	
Vision, mission, goal, objectives, values and strategies	I, Don't sound well and not formulated in SMART manner s	
Personnel capacity	 Lack of an expert; in maternal health in development mobilization and sensitization methods workshop/training facilitator Lack of project management skills (especially management based on results) for new staff; Lack of sufficient skills qualification for accountant; 	

	Lack of women staff while a large number of ADENYA's activities
	beneficiaries are women;
	• Combination of more than one activity/service which have not to be
	combined; e.g.: There is only one person who is in charge of
Administrative	ADENIXA doos not have softcony filing system:
canacity	 ADENTA does not have solicopy ining system, There are no appropriate procedures governing equipments(computer.
capacity	 Intere are no appropriate procedures governing equipments(computer, nhotocony machine internet etc);
	 No sufficient logistical infrastructure (e.g. stock) and equipment (e.g.: car
	Moto, bicvcle, etc):
	 Apart from logistical infrastructure and equipment, the organization does
	have adequate infrastructure and equipment for administration activities.
Financial capacity	• As the organization doesn't have appropriate accounting software, financial
	recording and reporting is not well assured;
	• Financial reports are not prepared at least quarterly and circulated to
	appropriate parties promptly and that makes more difficult to use financial
	reports used for planning and decision – making during the year;
	 The organization doesn't have an internal auditor;
	The bank reconciliation is done annually.
Governance and	• Senior staff is not skilled/trained in financial resource mobilization;
management	 New staff doesn't have sufficient skills in community organization/
capacity	mobilization/sensitization;
	• All staff don't have adequate communication skills as required for the job;
	 All staff/ members don't nave adequate interpersonal skills and interpersonal feedback practiced and appreciated;
	• The person in charge of accounts/ bookkeeping doesn't have adequate
	financial management skills:
	 There are not in place Staff development policies/ plans:
	• The systems which help the organization to keep informed about the latest
	techniques/competencies/policies/trends in its areas of expertise is weak
	• The organization doesn't have internal expertise on knowing how to get
	baseline data and how to develop indicators;
	• The coordination of field and office work is threatened by lack of Human
	resources, infrastructure and equipment.
Material – Financial	 The organization doesn't have adequate/sufficient working/office space;
resources and	• The equipment is not sufficient even for at least the basic needs of the
sustainability	organization;
	The available transport equipment within the organization is not appropriate
F 1 1 1 1	to the environment;
External relations	
and networking	
Programme	• The organization does not have means of tanning skills & experiences
performance	available in the community:
periormanee	 The community does not have sufficient decision-making responsibility.
	• There is no appropriate methods of baseline information gathering &
	documenting
Gender concerns	• There is no organizational gender policy to guide the operations and general
	practice of the organization;
	• There is no adequate gender representation in the management structures
	of the organization, including the board and the staffing;

•	No woman holds key position within the organization;
•	ADENYA's staff is made up by few number of women
•	ADENYA is not involved in gender lobby movements.

III. FURTHER CAPICITY BUILDING NEEDED

Areas of Weaknesses (in short)		Proposed action for capacity building	
weaknesses			
tracking			
Identity –	Identity is limitative for the	Reformulation	
Attitude	intervention area		
Vision,	Don't sound well and not formulated in	Reformulation	
mission, goal,	SMART manner		
objectives,			
values and			
strategies			
Personnel capacity	Lack of adequate expert in skills and number	 Training on project design, implementation and management. Project staff have also to be trained on M&E plan design and use baseline information including use data base software in decision making; Hiring new staff in charge of procurement and competent account with up-date skills on bookkeeping and financial report production. 	
Administrative	• Lack of softcopy filing system and	 1 off-road (4x4) vehicle 	
capacity	appropriate procedures governing	• 10 motorcycles for community monitors	
	equipments(computer, photocopy	• 1 kit ARTEL for internet connection as	
	machine, internet, etc);	the area is not covered by Rwandatel	
	No sufficient infrastructure and	/Rwandacell (MTN) network	
	equipment	• 3 lap-tops	
		• 1 projector	
		As there is no electricity there is a need of color panel and generator	
		To build (root more office and stocks	
Financial	 No accounting software for 	Accounting software	
capacity	accounting recording	Hiring a competent account and internal	
	Preparation Financial reports and	auditor	
	bank reconciliation at least		
	quarterly;		
	• The organization doesn't have an		
	internal auditor;		
Governance	• Senior staff is not skilled/trained in	• Trainings of senior staff on financial	
and	financial resource mobilization;	resource mobilization;	
management	• New staff doesn't have sufficient	• Trainings of new staff on community	
capacity	skills in community organization/	organization/ mobilization/sensitization	
	mobilization/sensitization;	• Trainings of staff on interpersonal skills	
	• All staff doesn't have adequate	and interpersonal feedback practised	
	communication skills as required	and appreciated	

	 for the job; All staff/ members don't have adequate interpersonal skills and interpersonal feedback practised and appreciated; There are not in place staff development policies/ plans; The systems which help the organization to keep informed about the latest techniques/competencies/policies/ trends in its areas of expertise is weak The organization don't have internal expertise on know how to get baseline data and how to develop indicators; 	 Trainings of project staff on M&E plan design and baseline study including data base software; Establishment of staff development policies/ plans; Establishment of the systems which help the organization to keep informed about the latest techniques/competencies/policies/trend s in its areas of expertise;
Material – Financial resources and sustainability	Idem for Administrative capacity	Idem for Administrative capacity
External relations and networking	_	
Programme performance	 The organization does not have means of tapping skills & experiences available in the community; The community does not have sufficient decision-making responsibility; 	 Mobilise ADENYA on the importance of skills and experiences available in the community; Mobilise ADENYA on the importance of involving the community in decision making process on all level of the project.
Gender concerns	 There is no organizational gender policy to guide the operations and general practice of the organization; There is no adequate gender representation in the management structures of the organization, including the board and the staffing; No woman holds key position within the organization; ADENYA's staff is made up by few number of women ADENYA is not involved in gender lobby movements 	 Establishment of gender policy; Mobilise ADENYA on the importance to have a significant representation of women at all level of project/organization management

1. Organization name	Centre for Innovation and Technology Transfer
2. Organization Type (Please Select):	x Academia € Development Agency (Bilateral) Multilateral) € Foundation € Government € Non-Governmental Organization (NGO) € Private Business
3. Organization Email Address	info@kist.ac.rw
4. Organization Website:	www.kist.ac.rw
5. Telephone:	+250574697/98/or513619
6. Fax:	+250571925/571924
7. Address (city/district/ province:	Avenue De l'armée, KIGALI
8. Contact person 1; Name (Last, First):	NTAGWIRUMUGARA ETIENNE
9. Position at organization	DIRECTOR,KIST/CITT
10. Telephone:	+250-08500639
11. Email Address:	dcitt@.ac.rw
12. Contact person 1; Name (Last, First):	RUTAMU
13. Position at organization	Head of Projects
14. Telephone:	+250 08759095
15. Email Address:	
16. Date Established	1998
17. Does the organization has a legal	Yes ENo€if yes since: date/month/year
personality ?(registration, visible, etc)	CITT established at KIST,2002
18. Special niche (a place not quite filled by othe	r organizations) in the development of the community.
	- · · · · /

Academic knowledge put together for research and innovation to outreach rural& peri-urban communities

2. VISION, MISSION, GOAL, OBJECTIVES, VALUES AND STRATEGIES

 VISION (*in brief*): Excellence for research, development, Transfer of appropriate technology focusing on rural& peri-urban communities.
 MISSION (*in brief*): Develop appropriate technological innovations, ensuring sustainable adaptation of private sector
 GOAL (*in brief*): Increased application utilization of appropriate technologies
 OBJECTIVES (*in brief*) to spore head transformation of social& economic condition of Rwanda communities
 Is there a system and Indicators for monitoring and evaluation of objective? Yes s No€
 VALUES (*in brief*) Inventory of technologies transferred per year
 STRATEGIES (*in brief*) Inventory of technologies transferred per year
 Is there any system of gathering information at the beginning of the activities? Yes No€ *if yes provide supporting document(reference) CITT strategic plan* Gathered information from monitoring is used by (project) managers for decision making? Yes No€
 If yes how? Through analysis of reports and therefore decision making **11.** Are there effective participatory monitoring and evaluation system in use? Yes€ No€ *if yes provide* supporting document(reference) strategically involvement of students

3. PERSONNEL CAPACITY

Explanatory notes		Explanatory notes			
1.	Is there an appropriate, functional and written organization structure (with roles/ expectations clearly defined)?	Yes ⊇No€if yes provide supporting document(reference) used KIST General organization Chart, revised 2007			
2.	How many employees work for the institution? <i>Total Number</i>	48 ermanent employees			
3.	What is the level of education of employees? Number per level	Univ 28 Second 10 Vocati 10 Alphab etized education y g:			
4.	Are human resources adequate to	carry out the organizational objectives?			
	In numbers	Yes			
	 In skills 	Yes			
	 Is gender balance taken into consideration 	Yes			
	 Are skills qualification matching with job requirements 	Yes			
5.	What type of technical assistance resources and why? In numbers (no	e do the institution need to improve the capacity of its human $\widehat{\mathfrak{S}}$ in skills $\widehat{\mathfrak{S}}$ in matching skills qualification with job requirements $\widehat{\mathfrak{S}}$			
6.	Specify the area(s) of improvemen	t: N/A			
7.	Are there systems/ procedures through which staff members are hired and fired?	Yes ENo€if yes provide supporting document(reference)			
8.	Is there orientation/ induction system of new staff?	Yes No€if yes how does it work			
9.	Are there incentives/ motivation for employees?	Yes \mathbb{R} : No \in if Yes Which ones? If not why? employees get a percentage of the carryings they are involved			

4. ADMINISTRATIVE CAPACITY

Exp	planatory notes	Explanatory notes
1.	Is there a guideline for administrative matters/ office procedures? E.g. applying for	Yes No€ if yes provide supporting document/reference (ISD)
	and equipment, do's and don'ts etc.	
2.	Is there a simple and well organized filing system.	Yes ENo€if yes What is the procedures
3.	Are equipment and supplies recorded?	Yes ∑No€if yes What is the procedures
4.	Is there inventory a system on time basis?	Yes ∑No€ if yes is it done Dairy€ weekly€ monthly
		€quarterly €annually v€?
5.	Are there appropriate procedures governing	Yes C No€ if yes provide supporting
	transport, use of equipment, etc?	document/reference (Estate department operation)
6.	Does the organization possess logistical	Yes No€if yes specify them

	infrastructure (e.g. stock) and equipment	School bus, stock;
	(e.g.: car Moto, bicycle, etc)?	
7.	Does the organization have procurement	Yes I No€ if yes provide supporting
procedures and regulation		document/reference

5. FINANCIAL CAPACITY

Are	eas for assessment	Explanatory notes
1.	Does the organization have	Yes No€if yes provide supporting document/reference (ISD)
	financial procedure and	
	regulation?	
2.	Is there a guideline for approval	Yes No \in if yes provide supporting document/reference KIST
	of financial transactions?	Auditing Procedures Document
3.	Are there guidelines for	Yes v€ No€ if yes provide supporting document/reference
	controlling expenditures, such as	Auditing Procedures Document
	purchases?	
4.	Does the organization have a	Yes No€if no Why?
	regular budget cycle?	
5.	What is your annually budget in	2005: Rwfr2006: Rwfr2007: Rwfr
	last 3 years?	No response
6.	Does the organization produce	Yes No€
	separate programme and	
_	projects budget?	
7.	Are project budgets met up	There are most of the time significant over-spending∉/ under-
_	most of the time?	spending €, there is neither over/under-spending
8.	What is the maximum amount	Rwfr 300,000,000
	of money that the organization	
•	manageur	Mar Mar Ciferra have?
9.	boes the organization ensure	Yes ∎NO€ If yes now?
	physical security, cash and	Finance procedures available at KIST
10	Does the organization	
10.	dishurse/nay funds in a timely	
	and effective manner?	
11.	Does the organization have the	Yes No€
	ability to ensure proper financial	
	recording and reporting?	
12.	Does the organization have a	Yes ENo€if no why?
	bank account with more than	—
	one signatory?	
13.	Are there clear, written	Yes No€if yes provide supporting document/reference
	procedures/ guidelines for	
	changing signatories?	
14.	Are financial reports prepared at	Yes No€if yes provide supporting document/reference
	least quarterly and circulated to	
	appropriate parties promptly?	
15.	Are financial reports used for	Yes ENo€if yes provide supporting document/reference
	planning and decision – making?	
16.	Are external audits done at least	Yes∎No€if yes provide supporting document/reference
47	once a year?	
17.	Does the organization have an	Yes ∎No€If no why?
1	internal auditor	

18. Does the organization generally	YesENo€if no why?
meet agreed donor financial	
requirements?	
19. Is the bank reconciliation done?	Monthly Quarterly €Annually €Never done€.

6. GOVERNANCE AND MANAGEMENT CAPACITY

Are	eas for assessment	Explanatory notes
1.	Do managers have skills (from academic	Yes ENo€if yes how? If no why?
	background and experience) in general	Through their CVs and achievements
	management? E.g. planning, organizing	
	directing control, etc.	
2.	Do senior staff is skilled in project design	Yes No€if yes how? If no why?
	and proposal writing or financial	through experience, Project done previously
	resource mobilization?	
3.	Do Staff/ members/ board have skills in	Yes No€if yes how? If no why?
	monitoring and evaluation?	But need further training
4.	Project staff has skills in community	Yes No€if yes how? If no why?
	organization/ mobilization?	
5.	Does all staff have adequate	Yes INo€if yes how? If no why?
	communication skills as required for the	One of recruitment +fulfillment
-	job?	
6.	Do all staff/ members have adequate	Yes No€if yes how? If no why?
	interpersonal skills? Is Interpersonal	CV checked and their performance at the field
	feedback practised and appreciated?	
7.	Does the person in charge of accounts/	Yes INo€if yes how? If no why?
	bookkeeping have adequate financial	Qualified enough
-	management skills?	
8.	Are there in place staff development	Yes No€ If yes now? If no why?
0	Are training opportunities equitably	Vac Nacify as how 2 If no why 2
9.	shared? Taking into consideration	When we have the qualifications goes for further studies
	denartment/gender	whoever has the qualifications goes for further studies
10.	Are there any systems which help the	Yes No€if ves specify them and if not why?
	organization to keep informed about the	Short courses workshops, internet, public lectures
	latest	
	techniques/competencies/policies/trend	
	s in its areas of expertise?	
11.	Does the organization have access to	Yes No€ if yes specify them and if not why? Library
	relevant information/resources and	available but not well furnished
	experience?	
12.	Does the organization know how to get	Yes ENo€if yes how? If no why?
	baseline data and how to develop	Researches and data dissemination
	indicators?	
13.	Does the organization apply effective	Yes No€if yes how? If no why?
	approaches to reach its targets (e.g.	Through research ,evaluation
	participatory methods).	
14.	What/how is the organization presence	Explain briefly
	in the field? Intervention area, etc	Successful in transferring technologies
15.	What the capacity of organization to	Explain briefly
	coordinate the field and office work?	Very good because it has branches responsible for either

branches, field staff, etc field or office works

7. FINANCIAL RESOURCES AND SUSTAINABILITY

Are	eas for assessment	Explanatory notes
1.	Is there any funding strategy?	Yes No€if Yes Which ones? If not why? But not enough
2.	While looking for donors, does the organization approach them with a vision consistent with that of the organization?	Yes No€if Yes Which ones? If not why? Through the department of partnership and client liaison
3.	Are there significant sources (Financial & material) of support from the community?	Yes €No if Yes Which ones? If not why? Like from schools and Ministries
4.	Is there evidence of organization's ability to mobilize local resources?	Yes E No€ if yes Which ones? If no why? Though advertisement
5.	Are the organization's key staffs involved in budget formulation?	Yes No€if yes how? If no why? Every department does its budget
6.	Is the organization innovative and creative in its fundraising approaches?	Yes No€if yes how? If no why? CITT is the center for "innovation" that is why it always innovate new products according to the priorities of donor and the government.
7.	Is the organization able to "make do" with what is available?	Yes No€if yes how? If no why? Most of time CITT has sufficient means to accomplish its mission. If there is a need for example of transportation means which is not sufficient and appropriate for environment, CITT uses what is available
8.	Are resources utilized and managed to give the greatest possible benefit.	Yes No€if yes how? If no why? But with efforts
9.	Does the organization have adequate/sufficient working/office space?	Yes No€ specify number of offices/branches/trainings rooms/conference rooms and others compared to the need of the organization. Try also to highlight the needs 3 branches(East, west& North training rooms
		(KIST3,lowcosthousing and 3 auditoriums)
4.0		A bigger conference hall is needed
10.	is the equipment sufficient for at least	Yes No \in If no specify the need Research is done students are taught atc
11.	Does the available transport within the organization appropriate to the environment?	Yes if yes what is transportation means available in the organization No \in if no specify why and needs Not at all, vehicles are few
12.	Does the organization have activities of generating its own resources (other than donors)?	Yes ■No€if yes which ones? If no why? But on a small scale CITT produce different materials including stoves
13.	Does the organization have diversified/multiple sources of funding (not just one major donor)?	Yes No€ If yes what are different donors of the organization?
		ij no explain why
15.	Is the organization aware of numerous	Yes No€ <i>if no specify why</i> As the leading technology center, CITT is a bridge for

		every actor in technology. This allow it to be in contact
		with all donor/source of findings
8.	EXTERNAL RELATIONS AND NETWORKING	
Are	eas for assessment	Explanatory notes
1.	Does the organization regularly/frequently	Yes No€if yes which ones? <i>if no explain why</i>
	take part in network/collaborative efforts	Government institution
	with other organizations (gov't & NGO)	NGO
2.	Does the organization have adequate level	Yes No€if yes which ones/how? <i>if no explain why</i>
	of representation in relevant professional	CITT is the leading technology transfer in Rwanda and
	associations/coalition?	this allow it to be represented in all level of
		professional association
3.	Is there adequate	Yes ENo€if yes how? <i>If no explain why?</i>
	collaborative/cooperation with the	We are part of the government Institution.
	government (services, information, policy	
	development, etc).	
4.	Is the organization aware of relevant	Yes No€if yes how? If no explain why?
	government plans and priorities in the	CITT have the mission given by the government of
	area?	Rwanda to transfer technology to the community
5.	Are government local	Yes No€if yes how? If no explain why?
	authorities/agencies/departments	They are influenced by CITT's activities and this is
	influenced by the work of your	explained by the high demand
~	organization?	
ь.	Do Members/stan/ board share the	Yes No€If yes now? If no explain why?
	lossons with others through various moons	Through beneficiaries, meetings, brochure, reports,
	(oral written exchange visits etc.)	
7	Is there a willingness and ability to learn	Ves Nof if yes how? If no explain why?
<i>.</i>	from other organizations and individuals	Restructuration of structures after learned experiences
	as signified by changes made after	nestracturation of structures after rearried experiences
	exchange visits and other learning forums?	
8.	Are partners for collaboration (especially	Yes No \in if ves how? If no explain why?
	donor partners) selected on the basic of	,,,,,,, _
	shared values and those terms and	Through discussion and come to a consensus
	conditions of collaboration are mutually	
	discussed to the satisfaction of each party?	
9.	Are External resources persons (from	Yes No€if yes how? <i>If no explain why?</i>
	other organizations, government, etc)	As an academic institution, CITT work extensively with
	involved appropriately?	lecture outsourcing and researchers
10.	Does the community (not just	Yes No€if yes how? If no explain why?
	beneficiaries/members) have knowledge	CITT is known through services/products offered to the
	of the activities of the organization?	community advertisement
11.	Does the organization have credibility (is	Yes No€if yes how? <i>If no explain why</i> ?
	trusted, respected) in the community at	Esp. in saving the environment and improving
	large.	community livelihoods.

9. PROGRAMS PERFORMANCE (in general)

			1 0 1		
Are	eas fo	r assessment		Expl	anatory notes
1.	Do	vulnerable	groups/disadvantaged	Yes	No€if yes how? <i>If no explain why?</i>

	(i.e. women, OVCY, elderly, disabled, the poor) benefit from the organization's activities?	We support associations of vulnerable by trainings
2.	Is sustainability considered in all aspects of programming?	Yes No€if yes how? If no explain why? Sustainability is considered in all aspect of programming trough transfer of technology.
3.	Does the community have decision- making responsibility?	Yes Now if yes how? If no explain why? Yes and no because in some activities and level are involved and for other they are not
4.	Are the communities involved in all phases of the programme?	Yes No if yes how? If no explain why? It depends on the type of the programme or the project but in general CITT respond to the need and demand of the communities
5.	Do communities feel they "own" the project/activities of the organization?	Yes No€if yes how? If no explain why? In the most cases, CITT offer services demanded by communities
6.	Do organization's activities meet felt needs of the communities?	Yes ■No€if yes how? If no explain why? Through needs assessment carried out, workshop an d meetings
7.	Are alternative strategies to address community needs adequately explored before intervention?	Yes No€if yes how? If no explain why? Needs assessment
8.	Is baseline information gathered & documented through appropriate methods? There is adequate diagnosis of problem(s) prior to intervention.	Yes ∎No€if yes how? If no explain why? Through surveys &Quick regional scanning
9.	Is there adequate diagnosis of problem(s) prior to intervention?	Yes No \in if yes which ones? If no explain why? we take in mind priority needs
10.	Are detailed implementation plans made with activity time tables?	Yes ■No€if yes how? If no explain why? Plans of action
11.	Are implementation plans made with the involvement of all the stakeholders?	Yes No€if yes how? If no explain why? In most of time CITT work in partnership with other partners, there reason why it has always to plan together with all stakeholders.
12.	Are plans followed and used or revised appropriately when carrying out activities?	Yes No€if yes how? If no explain why? By following action plan steps and project reviews.
13.	Do organization monitors document and learn from its experiences?	Yes ■No€if yes how? If no explain why? By regulars technical meetings and all evaluation steps.
14.	Are skills needed to manage the project passed on to the community?	Yes No€if yes how? If no explain why? Through trainings
15.	Does the organization have means of tapping skills & experiences available in the community? e.g. use of wisdom and experience of community elders, indigenous technical knowledge, and community resource persons etc	Yes No€if yes how? If no explain why? From existing technology CITT improve the technology own by the community,
16.	Are there observable improvements in the lives of beneficiaries in the community as a result of the	Yes No€if yes specify some, If no explain why? Installation of bio-digester in prison and in household have reduced the biomass used for cooking and lighting

organization's activities? Some examples

10. GENDER CONCERNS

Are	eas for assessment	Explanatory notes
1.	Are members of the board of	Yes €No if yes how? <i>If no explain why</i> ?
	management adequately exposed and	There is no policy
	sensitized on gender concerns?	
2.	Are members of staff adequately	Yes €No if yes how? <i>If no explain why</i> ?
	sensitized and trained in gender analysis?	There no policy
3.	Are communities, which the organization	Yes €No if yes how? <i>If no explain why</i> ?
	work with, adequately exposed and	
	sensitized on gender concerns, which	
	they reflect in their daily practice	
	including leadership representation in	
	their groups made up of the two sexes.	
4.	Are there organizational gender policy to	Yes \in No \square if yes which ones (reference document)? If
	guide the operations and general practice	no explain why?
	of the organization?	
5.	Is there adequate gender representation	Yes \in No give number of male and female at each
	in the management structures of the	level? No specified number
	organization, including the board and the	
6	statting?	
6.	Does fairly good number of women hold	Yes Not if yes which ones (reference document)? If
	key positions within the organization?	no explain why?
7	le there fair allocation of chances by	Not specified
1.	is there fair allocation of chances by	Yes Not if yes now? If no explain why?
	buman resource canacity building	there is an opportunity of capacity building and women are
	onportunities?	more preferred in some cases
8	ls the organization involved in gender	$V_{05} \notin N_{0} $
0.	lobby movements within the	ites a nomin yes now? If no explain why?
	District/province/ country/region?	
8.	gender for staff development and other human resource capacity building opportunities? Is the organization involved in gender lobby movements within the District/province/ country/region?	Men and women are considered as the same level when there is an opportunity of capacity building and women are more preferred in some cases Yes €No if yes how? If no explain why?

CITT is endowed of sufficient technical, financial and organizational capacities as a branch of KIST; a leading higher institution in technology in Rwanda.

Nevertheless, a gender policy has to be developed and more transportation means adapted to environment have to be availed.

APPENDIX 4: DATA COLLECTION TOOLS

Community-assisted Access to Sustainable Energy" (CASE) project – Rwanda

QUESTIONNAIRE FOR HOUSEHOLD

Names of enumerator:
Date of interview:
Names of data entry agent:
Date of data entry:
Household and its members – basic data

N°	Question									
1.1	Code of chose	n hous	ehold							
1.2	District					1.3	Sect	or		
1.4	Cell/Akagari					1.5	Um	udugudu		
1.6	Name of the h	ead of	household:							
1.7	Sex of the hea	d of the	e household Female	e(1)	Male(2	2) 1	8 /	Age of the nousehold	head of the	years
1.9	Category of th (3)	ne head Stov	l of household : Vuln e maker (SM) (4)	erable VW8	e woma kCM (5	an (VV 5) O\	V) (1) /CY&(OVCY(2) CM(6) V	Charcoal Pro W&SM(7) OV	oducer(CP) CY&SM(8)
1.10	Name of Interv	viewee	:							
1.11	Sex of intervie	wee	Female (2	1) Ma	le (2)			1.12 ^H	His/her	Age:
1.13	Interviewee's Him/her-self (member(5)	(0) spo	relationship use(1) Daughter (2	to 2) So	on (3)	the grande	daugh	head iter(4) gra	of Indson(5) otl	household her family
1.14	Who lives in h	ouseho	old (total number)?		1			T		people
1.15	Women(1) Men(2) Girl(3) Boy(4)	Age	Relationship to head of house Him/her-self (0) sp (1) Daughter / So granddaughter/son other relatives Household worker other –Specify PLZ	the ehold oouse n (2) (3) (4) r (5) (7)	ng witho educa alphal Prima Secon Vocat colleg Unive other	ut tion petized ry dary ional e rsity (7)	(1) (2) (3) (4) (5) (6)	household agricultur husbandr Business (5) Gvt small er student unemploy – specify (Paid	d works (1) e (2) y (3) (4) handcraft employee(6) hterprise (7) (8) ved (9) other (10) Unpaid	Lives in househ old (1) Don't live in househ old (2)
1										
2										
4										
5										
6 7										
8										
9										
10			•• •• •			(4) =				
1.16	Are there any train	nings d ?(Them	id you attend in last e)	GoR's	rs? Ye uct by s insti (2).	<u>s (1) N</u> tution Cor	io (2) s (mmur	Partici (1), Spouse hity daugh	pant e(F) (1) Spou ter (3) son (use(M) (2) (4) others

		organization(3), Churches	members of the family who
		(4), Private Organization	lives in households(5)other
		or company (5) Others –	members of the household (6)
		Precise PLZ (6)	
1	Training of trainers improved stove making		
2	Improved stove making		
3	Improved charcoal making techniques		
4	Energy-saving cooking techniques		
5	Energy saving		
6	Environment protection		
7	Income generating activities		
8	Savings and Ioan		
9	Development organizational Management		
10	Others (Precise)		

	Are there any member of the family participate	in any groups or orga	nizations? Vacl 1) No	(2)
1.17	If yes; Name of the group / organization	What is its main activity? Agriculture(1) husbandry (2) Small business (3) Improve stove making (4) Charcoal production(5) handicraft(6) others (7) Specify	Who participate? Spouse(F) (1) Spouse(M) (2) daughter (3) son (4) others members of the family who lives in households(5)other members of the household (6)	What is his/her position? ordinary Member (1) Member of the board (2) President/c hairperson (3)other position (4)
1				
2				
3				
4				
5				

2. Housing, cooking and facilities of household Who owns the house where you live? : yourself/your household (1), your extended family (2) 2.1 government (3), renting (4), friend (5) business company (6)others (7) specify...... 2.2 How many rooms are in your house? 2.3 Is the house made of (write down all. E.g. : 1 + 7)? 2.3.1 Wall: Fired mud Brick (1), Brick Cement (2), Unfired mud Bricks (3), Mud and wattle (4) Stones (5) floors (6) other (7 – Specify) 2.3.2 Roof: Slates (1) Tiles (2), Plastic sheeting (3), Straw (4), other (5 - Specify) 2.3.3 Floor: Tiles (1), Bricks made from Cement (2), Bricks (3), ground (4), stone (5), others (6 -Specify Where do you Cook? : in the Kitchen (1) 2.4 in the Courtyard (2) in the Room(3) Other (4specify) What type of cooking 2.5 Type Use stove do you use? 1 cooking stove Traditional cooking stove using fire wood/charcoal% (In case several energies Improved stoves using fire wood/charcoal 2% and household appliances% 3 Petrol cooking stove are used for cooking, PLZ 4 Gas cooking stove (modern)% write it down and add %) 5 **Electrical stoves**% 6 **Biogas burner**%% 7 Cylindrical frying pan made in metal Local type Stove (indicate it PLZ) 8% Other (indicate it PLZ% 9 2.6 Types of stoves which are 2.6.1 Types 2.6.2 Reasons recommended by local Improved stove in general (1) Cheaper(1) Time saving(2) Wood authorities and saving(3) Easy to make(4) Reduction why Local Cray stove (2) Round mud (please write it down) stove(3) local metal stove smoke disturbance(5) cleanliness(6) (4)Rocket stove (5) Oval local Others (7)- specify stove (6) ISAE stove (7)

CASE Project Baseline study Report

ъ.	What types of	Energy did you u	se and suppl	y in last 3	years?							
e	Source of	Are they used	How to	Distance	Quan	tity used p	oer Av	ailabil	ity			
	energy	for?	obtain?	from the	e mont	£	ð	n	it No	Period of	Problems	Responsible to
		cooking (1),	collected	househo	_		>	>	cost	availability	no problem	collect or to
		lighting (2),	(1),	ds to buy	>		nd	Ir Pri	(0) 0	Permanent	(1)	provide
		Education (3)	delivery	or tí	<u> </u>		£	a a		(1)	Hard to	Spouse (1)
		Productive	(2),	collect			se	σ		Rainy season	obtain (2),	Daughter / Son (2)
		use (4),	shops	(round						(2)	expensive	grandchildren (3)
		transport (5),	(3),	trip)						Dry season	(3), difficult	other relatives (4)
		Entertainmen	ELECTRO	Km	Qua	Unity used bag	(1)			(3) harvest	to use (4),	Household worker
		t (6) others	GAZ (4),	c	ntity	bundle(2) Lit	ter			season (4)	disturbing	(5) other
		(7) – precise	market			(3) Kwhi	(4)				smoke (5),	(6)specify
			(5),			Tons/(stère)	(5)				other (6) -	Fill all e.g.
			others (6)			others specify	(9)				specify	1+2+3+
3.1	Fire Wood											
	insed in											
	traditional											
	stoves											
3.2	Fire Wood											
	used in											
	improved											
	stoves											
3.3	Firewood											
	produced											
3.4	Firewood											
	used to											
	produce											
	charcoal											
	(with											
	traditional											
	methods)											
3.5	Firewood											
	used to											
	produce											
	charcoal											
	(with wood											

	_	_				
saving methods)						
Charcoal						
LPG(Gas)						
Fuel						
Car						
Batteries						
Batteries						
Candle						
Electricity						
Solar						
Wind						
Biogas						
Others						
3 Sources of energy most important for the	family	Firewood (1) ch (8) specify	iarcoal (2) fuel 	(3) electricity (4)	car battery	(5) batteries (6) candle (7) others
3 Important Needs of energy for the family	:	Cooking (1), ligothers (7) – pre-	ghting (2), Edu cise	cation (3) Produ	ctive use (4),	transport (5), Entertainment (6)
The supply of cooking energy is		Less enough for	the family (1)		Enough fo	r the family (2)
		INIORE ENOUGN TO	or the ramily (3		I don't kn	DW (4)
Did Cooking techniques change in your farr last 3 years?	ily in No	(1)	Improved (2)		Reduced (3)	
Trees planted annually around 3.21.1	-	3.21.2For Firewo	ood (1) Eating (2) Fruits (3) Med	icines (4) Env	ironment protection (5) others (6)
houses over the past 3 years Number		specify	٨			
3.21.3 From; (sources) Plant sales outlet:		i. 3.21.4 of	Initiator 3.21 the	5 Technical supp	oort needed:	More plants (1) Improved plants which care about environment
Household member(s) (1) CBO(2) Local authorities (3) churches (4) Local NGOs(5)		plantati	ion:			(2) Trainings (3) Space (4) Other (5) Specify
Others NGOs(6) others(7) specify	Househol	d member(s) (1)	CBO(2)			
	Local aut	horities (3) chure	ches (4)			
	Local N	GOs(5) Other	NGOs(6)			
	others(7)	specity				

4. F	ood and preparati	on								
	(write down w most eaten)	vhat	is Meal: Breakfas lunch diner between meals(4) (write d	t (1), (2), (3), own,	Basic food yes (1) No (2)	How Roast boile (3), wate boilir (5)	to prepare? ted (1) d (2), fried soaked in r before ng (4) others (write down	Family Produc tion (1) or Purcha sed (2)	Quantity p (estimation write dow quantity Produced	er month n in ton) n unity and Purchased
			For eg. 2	+ 3)		all, F0	or eg.: 2 + 3)			
4.1	Cereal: sorghum,	, mille e	et,							
4.2	Roots and Tul yams, C potatoes, Irish po	bers Cassav Dtatoe	: /a, 25							
4.3	Vegetables									
4.4	Bananas									
4.5	Beans									
4.6	Fruits									
4.7	Dairy Products									
4.8	Meat (cow, goat chicken, rabbit, sł	t, po heep)	rk,							
4.9	Fish									
4.10	Eggs									
4.11	others (precise)									
4.12	How many times	do al	l household m	nembe	ers eat per	day fo	r? once (1), tv	vice (2), Th	ree times (3)	
4.13	The food is			Less	enough fo	r the f	amily (1)	Enough fo	or the family	(2)
				Mor	e enough f	or the	family (3)	I don't kno	ow (4)	
4.14	How many times do you		4.15. How need to coo	much k all t	time do he meals:	you with	4.16. need	How much to cook all	ו time do the meals ו	you with
	cook per day?		traditional st	ove?			impro	ved stove?		
4.17	Did Diet situation	n var	y during the	4.18	If yes why	?: Inco	me(1) Clima	te(2) Energ	y problem(3) Number of
	last 3 year? Yes (1	L) No	o (2)	hous	ehold me	mber(4	I) Increase of	production	(5) others(6	6) (specify)
				4.19	if No why	?: Inco	ome(1) Clima	te(2) Ener	gy problem(3	3) Number of
				hous	ehold me	mber(4) Increase o	f productio	n(5) others(6) specify

5. Hous	seholds Duties and responsibility								
5.1	Who is Responsible of the activities below?	Spouse(M):	Spouse(F):	sons: hours	daughter:	Other family member:	worker:	All: hou	Irs
		hours /day	hours/day	/day	hours /day	hours /day	hours /day	/day	
5.1.1	Cooking								
5.1.2	Supply of cooking energy								
5.1.3	Food purchase								
5.1.4	Water supply								
5.1.5	House works(cleaning, to wash dishes, to do								
	laundry)								
5.1.6	Supply of lighting energy								
5.1.7	Health care for family members								
5.1.8	Education								
5.1.9	Income generating activities for the household								
5.2	Who takes investment decisions for?	Husband (1)	Wife (2) Boy (3) Girl(4) Othe	er family mer	nbers (5)			
5.2.1	Acquiring cooking facilities (Stoves)								
5.2.2	Starting improved stoves making business								
5.2.3	Contracting a loan								
5.2.4	Firewood and charcoal making production								
	business								
5.2.5	Other source of Energy								
5.2.6	Other household development activities								

6. H	ouseholds Income and	Expenses	over	the	past	3 year
6.1	What is your income during the last	three years?				
6.1.	Average annual income over the pas	t three year(in RwF)	:			
1	(1) Less than (2) Up 198,000 396.000	to (3) Up 1,200,000	to (4)	Up to 3,000	,000 (5)	Beyond 3,000,000
6.1.	Average monthly total income (cash)	(in RwF) :			·	
2	(1) Less than (2) Up to 33,000 16,500	0 (3) Up to 100,00) (4)	Up to 250,0	000 (5)	Beyond 250,000
6.2	What is your income generating act	ivities and monthly	Income	over the pa	st 3 years?	in RwF
	Activity	Monthly Average	Month	nly	Market	Total income in
		Quantity/Numbe	Averag	ge	Price per	last 12 months
		r made and sold	Quanti	ity/Numb	Unit	
		per tons/ steres)	er m	ade and		
6.2	Stoves (with improved methods)		SOIU III	tons		
0.2. 1	Stoves (with improved methods)	-				
<u> </u>	Charcoal (50kg bags of charcoal	-				
2	made with traditional methods.					
6.2.	Charcoal (50kg bags of charcoal					
3	made with improved methods)					
6.2.	Charcoal produced by 1 ton of					
4	firewood (with traditional					
6.2	methods)					
6.2. 5	firewood (with wood saving					
J	methods)					
	Activity	Monthly income		Inco	ome in last	12 months
6.2.	Cattle farming					
6	-					
6.2.	Agriculture					
7						
6.2.	Handcraft and métiers					
8 6 7	lob					
0.2. g	100					
6.2.	Business					
10						
6.2.	Pensions & subsidies from the					
11	government					
6.2.	Financial support from the family					
12	member					
6.2. 12	Others (write it down)					
15 6.2	Improved stove making activities in	Don't Exist (1)	امد	enough (2)	Fr	ough (3)
0.2. 14	the cell	More enough (Δ)	Can'	Exist (5)		lon't know (6)
6.2	Charcoal production activities in	Don't Exist (1)	Less	enough (2)	Fr	rough (3)
15	the cell	More enough (4)	Can'	Exist (5)	10	don't know (6)
6.2	Is there any charcoal collecting	(1)Yes (2) No	7.2 1	L7 if Yes Wh	ere?	
16	center in the cell?	(=):00 (=):00	,.2.1			
6.3	What are your expenses over the la	st 3 years? in RwF	<u> </u>			
6.3.	Average annual expenses	-				
1						
6.3.	Average monthly expenses					

-							1						
2	C												
6.2	Specific expe	enses in RwF					IV	lonthly		in las	t 12 m	onths	
6.3. 3	COOKING ENE	rgy											
6.3. 4	Lighting Ener	rgy											
6.3. 5	Other energy	y (for Radio, TV	. DVD,)										
6.3. 6	Average ann	ual total cost o	f energy										
63	Water												
7													
6.3.	Food												
8													
6.3.	Health												
9	Education												
10	Luucution												
6.3.	Transport												
11													
6.2.	Agriculture:	Seeds and equi	oment, fer	tilizes	, worke	ers							
12	Cattle farmin	a huuina fada	an watan	haalti	-								
0.3. 13	Cattle farmin	ig; buying, road	er, water,	neaitr	1								
6.2.	House Repar	ations Equipme	ent										
14	•												
6.3.	Social affairs	5											
15													
6.2.	Cooperatives	s/Village Group	S										
10 63	Financial Oh	ligations											
17		ingutions											
6.3.	Expenses on	external memb	ers of the	family	/								
18													
6.3.	Others (write	e down)											
19			h			622		Usuaha	م ماما م				
6.3. 20	Housenoids	needs covered	by improv	/ed y	6	6.3.Z	T	charcoal	busine	eeas (covered me	а бу	%
7	What are the	e loans and sav	ings vou r	nade i	n last t	hree v	ear	s?	busine	.55 1100			
7.1	Did the mer	mber of your t	amily 7	.2 Wh	o? Hus	band (1)	/ Wife((2) /	7.3 Wh	en?		
	receive a loa	n? Yes (1)No (2	.) so	on (3) /dau	ughter		(4) / o	ther	Year/n	nonth		
			m	embe	r of the	house	eho	ld(5)					
7.4	Received am	ount: Rwfr	Ed. and an	(2)	7.5	Intere	est:	1 1 1 - 1	D'	Rwf		-	· · · · · (F)
7.6	woney used for:	Health (1)	Education	1(2)	Equipn	nent	anc	tools	e/Veh	icles (rcyci 4)	Irain	ngs (5)
		Business A	nim Agr	icultur	e Ho	ouse	Im	proved	Char	coal	Óthe	er	business
		start (6) al	(7) (8)		(9)		ste	ove (10)	maki	ng (11)	(12)	Speci	fy
7.7	From	village Group	(1)	Bar	ık (3)			Project	: (5)		Friend	1 (7)	
	which institution?	Cooperative (2)	Chu	urch (4)			Family	(6)		Busine	essma	n (8)
7.8	Payement	Less than 6	6 mont	hs up	1 ye	ar up	to	2 years	up to	More	than	Not	paid (6)
	Period	month(1)	to 1 yea	r (2)	2 yea	irs (3)		5 years	. (4)	5 year	· (5)	'	

7.9	If it is not	yet pai	d, ho	w much	tir	ne remains t	o	do so?									
7.10	If it is not	yet pai	d, ho	w much	re	maining?											Rwf
7.11	How man	y times	the f	family ha	as r	eceived the	С	redit?									
7.12	Are you re	eady to	cont	ract a lo	an	to receive ir	m	proved st	ove?	Yes ((1) No (2)						
7.13	If yes, up	to whic	:h am	ount?													
7.14	Are you re	eady to	cont	ract a lo	an	to start imp	rc	oved stov	e mak	ing l	business	? Ye	s (1) N	lo (2))		
7.15	If yes, up	to whic	h am	ount?													
7.16	Are you re	eady to	cont	ract a lo	an	to start Cha	arc	coal prod	uctior	n (wi	th impro	ved	techn	ique	s)		
	business?	' Yes (1)) No (2)													
7.17	If yes, up	to whic	:h am	ount?													
	What abo	out you	r savi	ings?													
7.18	Is anyon	e in t	he f	family ł	nas	a saving	١	Yes (1)	No (2	2)	Husbar	nd(1	.) / V	Vife	((2	2)	/ son (3)
	account?										/daugh	ter	(4) /	othe	er m	eml	ber of the
			1		1				1		househ	old	(5)		1		
7.19	In	which	villa	ige	C	ooperative	I	Bank (3)	Cree	dit 8	saving	Pr	oject (5)	Otł	her	(6)
	institutior	n?	Gro	up (1)	(2	<u>2)</u>			C00	pera	tive (4)			-		. 1	
7.20	The	Healt	h(1)			Education		Equipme	ent	Bic	ycle/Mo	torc	ycle	Pro	tess	i	Mutual
	money					(2)		and tool	s (3)	/ /	/ehicles (4)		ona	al		aids (6)
	Was													trai	ning	gs	
	for	Ducin	0.00	Anima	.	Agriculturo		House	Due	inoc	c ctart f	or	Ducir	(5)	ctard	t fo	r Charcoal
	101	busin ctart (ess (7)		1	Agriculture		(10)	imr	nes	s start i sd sta		busii	less :		(10) /i+b	improved
		Start	()	(8)		(5)		(10)	making(11) techniques						-s(12	2)	Improved
8	Are the fo	ollowin	g con	structio	n r	naterials av	ai	lable in tl	ne res	vion	? Yes (1)	No	(2)	iiqut		-/	
8.1	Brick		0							,	(_)		(-)				
8.2	Crav																
8.3	Stones																
8.4	Sand																
8.5	Gravel																
8.6	Cement																
8.7	Wood																
8.8	Metals																
8.9	Metal pip	e															
8.10	Fût																
8.11	Other ma	aterial i	need	ed for	Im	proved stov	e	making									
	and charc	oal pro	ducti	ion													
							_										

9	What are your futur	e projects?										
9.1	Do you want to	Food (1)		Ene	ergy	、	Cook	ing(3)	Charco	oal (5) ction Stove m saving		Improved
	(mark all that can			Sup	piy (Z)			with s	aving	Slove m	laking
	be applied for)								metho	ds(4)		
		Agricultu	re (6)	Wa	ter		Hygie	ne (8)	Busine	ss(9)	Livestoc	ck (10)
		-		sup	ply(7)							
		Educatior	n (11)	Hea	alth (1	2)	Hous	e(13)	Other	(14)		
9.2	How much would							Payme	nt Condit	ions: c	cash (1)	in nature
	you like to invest in							(2) loa	in (3) wo	rk (4)		
	those											
	husiness starts?											
9.3	How much are able							Payme	nt Condit	ions: c	cash (1)	in nature
	to invest in those							, (2) loa	in (3) wo	rk (4)		
	improvements/busi											
	ness starts?											
9.4	Will other family me	mber be re	eady an	id ab	ole to	help	you	Yes (1)	No (2) I d	on't kr	10w (3)	
0.5	to do improvements	business sta	art?			Mic	1410 (2))	Dich (2	<u>۱</u>		
9.5	family economically	your Po	01 (1)			IVIIC	ule (2	2)	KICH (3)		
9.6	Would like to	invest in	Yes (1) ho	w mu	ch?	No (2) whv	not?			
	improved stove maki	ng?	、	, -	-							
9.7	Will be able to	invest in	Yes (1) ho	w mu	ch?	No (2) Unat	ole (3)	lf no,	why not?)
	Improved stove?									1		
9.8	Are you ready to use	e improved	Yes (1)			No	(2)	I don't	Alrea	idy use (4	.)
	stove								KNOW			
9.9	If Energy savin	ng(1) Time	9.10) If	no.	l do	un't k	(now (<u>(3)</u> 1) Unaffe	l ordable	- (2) Ci	ulture or
5.5	yes, saving (2)	Cleanlines	s why	?		tradi	ition	rites (3) alread	ly use	e (4) ot	thers (5)
	why? (3) Try ne	w cooking	g ,			Spec	ify	·			.,	.,
	techniques (4	4) other (5)										
9.11	Do you want to start	improved	9.12.	Do	o yo	u S	9.12.1	If yes,	who? (1)	Neight	bors (2)	Member
	stove making busines	s? Yes (1)	think	you	woul	d c	of con	1munity	(3) Non	comm	unity mei	mbers (4)
	NO(2)		Have Ves (1) No	omers n (2)	or C	Juner	(specity)			
9.13	Do vou have anv	needs to	Yes (1)	5(2)		No	(2)		I don	't know (3)
0.20	improve stove makin	g?	(=	,				(-)				-
91/	If ves? What are ther	<u></u>	Traini	nac l	(1)	Fur	nds (2) [cation (3) Mate	arial accie	tance (1)
5.14		C:	others	5 (5)	specify	y y	103 (2	,		, wate	. 101 03313	-tance (4)
9.15	Would you like to	invest in	Yes	(1)	Rwfr		No	(2) wh	y not? L	ack of	firewoo	d (1) no
	charcoal production	on with	how				trair	nings (2) not able	(3) lac	ck of fund	ls (4) lack
	wood saving techniqu	ues?	much	?			of m	harket (S	5) others (6) spec	cify	
9.16	Will you be able to	invest in	Yes	(1)	Rwfr		No	(2) wh	y not? L	ack of	tirewoo	d (1) no funds (4)
	charcoal productio	u with	now				train	iings (2) пос сара	anie (3	I TACK OT	iunus (4)

	r									
	wood	saving techn	iques?	much?		lack of m	arket (5) oth	ers (6) specify		
9.17	Are y	vou ready a	nd able to	Yes (1)		No (2)		I don't know (3)		
	produ	ce charcoal	with wood							
	saving	g techniques?	1							
9.18	If	Wood savin	g (1) Time	9.19 Do	you thin	k 9.20 lf	f yes, who	? (1) Neighbors (2)		
	yes,	saving	(2)	you w	ould have	e Membe	er of commu	inity (3) Non community		
	why	productivity	/(quantity	customer	s ? Yes (1) membe	ers (4) Other	(Specify)		
	?	and incom	ne) (3) Try	No (2)						
		new	charcoal							
		techniques	(4)							
9.21	Do y	ou have an	y needs to	Yes (1)		No (2)		I don't know (3)		
	produ	ice charcoal	with wood							
	saving	g techniques	?							
9.22	If yes	, What are	Trainings (1) Funds	(2) Locatio	on (3) Mai	rket (4) Mate	erial assistance (5) others		
	there	?	(6) specify							

Focus group discussion guide

Names	of Facilitator:											
Date o	f FGD:											
(CBO)	and participant –	- basi	c data									
<mark>1. Topi</mark>	c 1: Community E	Based	Organizat	tion <mark>(C</mark> E	3O) and participa	nt-basi	ic data					
Nr.	Question											
1.1	Code of chosen	СВО										
				1.2	District							
1.3	Sector					1.4	Cell/	'Akagari				
1.5	Umudugudu											
1.6	Recording method:	(1) note ta	king (2)Tape recording	(3) Not	e taki	ng & tape r	ecord (4)(Other <i>(specify)</i>		
1.7	Name of CBO:											
1.8	Level of CBO: (1) Nei	ghborhood	d (2) Vi	illage (3) Program	nme	1.9	Date of fo	undation			
1.10	¹⁰ Type of CBO: (1) Cooperative (2) Association (3) Company (4) Other											
1.11	Main activity o Other	f CBC	D: (1) Loar	n and S	Saving (2) Impro	ved st	ove m	naking (3) (Charcoal I	Production (4)		
1.12	Participant's rel (3) Stove maker	ation (SM)	ship: <i>Rela</i> <i>(4)</i> VW&C	tives ((CM (5)	0) Vulnerable wo OVCY&CM(6) VV	man (\ V&SM	/W) <i>(</i> (7) 0	1) OVCY <i>(2</i> VCY&SM (8)) Charco Others (9	oal maker(CM) 9)		
1.13	Sex of Facilitato	r	Wo	men	(1) Man (2)							
1.14	Origin of CBO : ((1) Co	ommunity	(2) Loc	cal Authorities, (3) Chur	ches (4	4) GoR (5) (CARE initi	ative (6) NGO		
1.15	How CBO chosen for FGD	was ?	Same Ca Random Commen	ntegory ly (4) nts:	ı(1)Mixed catego	ries (2) Cate	gory (ies) V	Vith local	authorities(3)		
1.16	Why CBO chosen for FGD	was ?	To get sp To get in To crosso Commen	becific i format check i hts:	information on th tion to a specific nformation (3)	ne grou region	up (1) (2)					
1.17	FG participants		Girls:	B	Boys:			Men:		Women:		

Topic 2: Trainings					
	Conduct by	Partic	ipants (%)8	k# if pos	sible
	GoR's institutions (1), NGO (2),	Men	Women	Boys	Girls
	Community organization(3), Churches				
	(4), Private Organization or company				
	(5) Others – Precise PLZ (6)				
Training of trainers					
improved stove making					
Improved stove making					
Improved charcoal					
production techniques					
Environment protection					
Energy saving					
Income generating					
activities and					
entrepreneurship					
Savings and community					
managerial/organizational					
development skills					
Others (Precise)					

Topic 3: Energy supply, demand and saving	5		
3.1. Existing firewood saving techniques	3.1 Yes	5(1)	3.2 If yes specify them
other than improved stoves techniques	No (2)		1.
			2.
			3.
3.3 Who are the stakeholders	1.		
	2.		
	3.		
	5.		
3.4 Relations with local authorities	Themselv	es (1) GoR (2) Churches (3) CARE (4) NGOs others
	(5) specify	/	
3.5 Existing firewood saving stove		3.6	ilf yes specify them
	Yes(1)		
		1.	
	No (2)	2.	
		3.	
3.7 Who are the stakeholders	1.		
	2.		
	3.		
3.8 Relations with local authorities	Themselv	es (1) GoR (2) Churches (3) CARE (4) NGOs others
	(5) specify	/	

3.9. Per	rception of local aut	horities	on U	ncon	cerne	ed (1) c	oncer	ned (2) help	oful (3	3) oth	er (4	4)
	Stoves (production an	d Llco)											
4.1 Stov	ves which have been ced	Local C local r Oval lo	Cray sto metal s ocal stov	ve (: stove /e (5	1) Ro e (3)I 5) ISAI	und mi Rocket E stove	ud sto stov (6)	ve(2) e (4)	4.2	use in	term	is of	%
4.3 HF	As currently using	4.3.1	4	3.21	, Numb	per by t	vpe		4.3.	3 Tvp	es of	sto	ves which
improve project level)	ed stoves in the area (Imidugudu	Total Numbe	er:	.)	(2)	(3)	(4)	(5)	are autl	recon	mmer es	ndec	by local
(To be made authorit	collected from FGD of CO & local ies)								(1).	(2)	(3)	(4)	(5)
4.4 Acti	ons taken by local au	thorities	in the	4.4	.1Nu	mber	4.4.2	2 Enum	erate	e ther	n		
last 3 ye	ears to promote the u	se of imp	proved				1.						
(To be	collected from FGD i	nade of	CO &				2.						
local au	thorities)						3.						
4.5 Average number of improved stoves made and sold per month over the past 3 years per individual													
4.6 Tota	and a langunt of time (in h	our) sper	nt per	h	nrs	4.7 To	otal ar	nount	of tiı	me(in	hour))spe	nthrs
week f	or collecting firewoo	d by tho	se HH			per v	veek	in fire	ewoo	d col	lectio	n f	or
using improved stoves those using traditional stoves 4.8 Difficulties Lack of row materials in the region(1) Lack of trainings (2) Lack funds (3)													
4.8	Difficulties La	ick of rov	w mate	rials	in the	e regio	n(1)	Lack o	f trai	inings	(2) L	ack	funds (3)
encount improve	ered by La d stove makers	ick of ma	rket(4)	othe	ers (5))							
4.9 Peop	ole involved in stove n	naking	Me	en		Wom	en			4.10 vw			VW
4.10.1 C	ovcy involved in stove	making		Bo	ys			giı	rls				
4.10.2	Improved stove	making	Less e	nou	gh (1))	E	nough	(2)				
	activities in the villag	e are	More	eno	ugh (S	3)	1	don't k	now	(4)			
4.10.3	Cooking techniques changed in last 12 m	in the onths	village	hav	ve be	e No ((1)	Impr	roved	d (2)		F (Reduced 3)
Topic5:	Charcoal production							_ _					
5.1	Carbonization 5.	1.Types:.	(1)		(2)		(3)			(4)		(5)
techniqu being us	ues which are <i>(h</i> sed	ave to be	e specifi	ed b	efore _.)							
5.2.	Improved 5.	2.Types:.	(1)	(2).		5.3	Improv	ved o	arbor	nizatio	on	(1) (2) (3
carboniz	zation techniques (3)	(4)		(!	5)	tec	hnique	S	which	n a	re	(4) (5)
introduc	ced (h	ave to be	e specifi	ed b	efore)	rec	ommer	nded	by	loc	al	
					<u> </u>		aut	horitie	s				_
5.4 Fire	ewood used to Q	uantit	5.5 Fir	ewo	od us	sed to	Qua	antity i	n 5	0.6 (charco	bal	Quantity
produce	e charcoal y	n tons	produc	e	cn	Igrcogl	ton	5	р	roau	lea		in tons

annually over the last 3 years (with traditional methods)		annual 3 year saving tons	y over the s (with w methods)	oast ood in		annu wood meth tons	ially w d savi nods	ith ng in	
5.7 Amount of time(<i>in hour</i>)hrs spent per week for producing			5.8 Amount of time(<i>in hour</i>) spent perhrs week for producing charcoal (with				rs		
charcoal (with traditional methods)			improved r	nethod	s)				
5. 9 Charcoal produced	d Quant	5.10 Cl	narcoal dem	anded	Quan	tit 5.11	Satisfa	ction	%
annually over the last in a section of the las	3 ity in	annual	nually over the past 3 y in ton			ons of de	5 of demand over		
each community		commu	inity					2013	
5.12 50kg bags of charcoa	1	5.13	50kg bags	of ch	harcoal				
made with traditiona		made	with impro	ved me	ethods				
over the last 3 years	ý	3 vear	id sold monthly over the past						
5.14 Actions taken by local 5.15 Number		mber	5.16 En	umerate	e them	if possible			
authorities in the last	3		1.						
years to promote the use	2		2.						
of improved charcoal			3.						
making techniques			4. 5.						
5.17 Difficulties encounter	ed in charc	oal Lao	Lack of wood in the region(1) Lack of trainings (2) Lack						
producers			nds (3) Lack	of mark	ket (4) d	others (5)			
5.18 People 5.18	5.18 People 5.18.1 with		HH1		n	Women	5.20V	w	
involved in tradi	tional								
charcoal business tech	niques					144.000	5.0.01	,	
5.18. impr	.18.2 with		HH		n	women 5.9.		/W	
tech	techniques								
5.10 Number of Ovcy involved charcoal		oal Wi	With traditional techniques		iques	Boy:	1	Girl:	
business			with improved techniques		ques	Boy: Girl:			
5.11.Charcoal production activities in			Less enough (1)			Enough (2)			
the village are									
		Mo	More enough (3)			l don't know (4)			

Topic 6: Income and savings from Stoves and charcoal Business						
6.1 Average annual income	(1) Less than	(2) Up to	(3) Up to	(4) Up to	(5) Beyond	
over the last 3 years per HH	16.500 Frw	33.000 Frw	100.000	250.000 Frw	250.000 Frw	
	(1\$usd/day)	(2 Us\$	Frw (6Us\$	(15 Us\$	(1Us\$/day)	
		/day)	/day)	/day)		
6.2 Average annual income	(1) Less than	(2) Up to	(3) Up to	(4) Up to	(5) Beyond	
per ton of wood, over the last	16.500 Frw	33.000 Frw	100.000	250.000 Frw	250.000 Frw	
3 years	(1\$usd/day)	(2 Us\$	Frw (6Us\$	(15 Us\$	(1Us\$/day)	

		/day)	/day)	/day)	
6.3 HH needs covered from stove making business	%	6.6 Number of HH needs covered from charcoal production business		%	
6.4 Average annual savings of	(1) Less than	(2) Up to	(3) Up to	(4) Up to	(5) Beyond
traditional charcoal	16.500 Frw	33.000 Frw	100.000	250.000 Frw	250.000 Frw
producers, over the last 3	(1\$usd/day)	(2 Us\$	Frw (6Us\$	(15 Us\$	(1Us\$/day)
years		/day)	/day)	/day)	
6.5 Average annual savings of	(1) Less than	(2) Up to	(3) Up to	(4) Up to	(5) Beyond
improved charcoal producers,	16.500 Frw	33.000 Frw	100.000	250.000 Frw	250.000 Frw
over the last 3 years	(1\$usd/day)	(2 Us\$	Frw (6Us\$	(15 Us\$	(1Us\$/day)
		/day)	/day)	/day)	
6.6 Average annual savings of	(1) Less than	(2) Up to	(3) Up to	(4) Up to	(5) Beyond
improved stove makers over	16.500 Frw	33.000 Frw	100.000	250.000 Frw	250.000 Frw
the last 3 years	(1\$usd/day)	(2 Us\$	Frw (6Us\$	(15 Us\$	(1Us\$/day)
		/day)	/day)	/day)	

APPENDIX 5: LIST OF INTERVIEWED PEOPLE

a) Heads of households interviewed

Names and detailed data of interviewee can be found in SPSS matrixes handed over with this Report.

b) Local authorities

District	Names	Post		
Gisagara	Theogene HABAKUBAHO	Natural Resources and Environment agent		
Huye	Charles KARANGWA	Natural Resources and Environment agent		
Nyamagabe	Serge NDAYITABI	Natural Resources and Environment agent		
Nyaruguru	Papias KARANGANWA	Natural Resources and Environment agent		
Nyaruguru	Christophe NTIRUSHWA	Vice Mayor in charge of Development		

Quintile	Rural population living in communities that		Mean hectares planted		
	practice Reforestation	on (%)			
	EICV1	EICV2	EICV1	EICV2	
Lowest	41.2	62.0	4.8	12.4	
Second	39.2	59.9	5.0	12.4	
Third	40.3	56.3	5.4	12.0	
Fourth	40.1	58.2	4.2	12.1	
Highest	37.4	62.1	3.9	13.2	
Total	39.8	59.6	4.7	12.3	

APPENDIX6: HOUSEHOLDS' ENGAGEMENT IN REFORESTATION ACTIVITIES, BY QUINTILE

Source: EICV2 results. Note: (1) Data refer to communities where replanting took place.

APPENDIX 7: TYPE OF STOVES FOUND IN THE SURVEYED AREA



Fixed improved stove: Round mud stove using firewood only



Fixed improved stove using firewood only



Fixed improved stove using firewood only



Traditional stove using firewood



Movable improved stove using charcoal only



Traditional stove using charcoal



Movable improved stove using charcoal only



Movable improved stoves using Firewood and charcoal



Movable improved stoves using Firewood and charcoal

PPENDIX 8: MAPS






