

GREEN GICUMBI PROJECT  
E- MAGAZINE

# GICUMBI ITOSHYE INTEGO YACU

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# EXECUTIVE SUMMARY

We are proud to present our second e-magazine, a comprehensive compilation of success stories that exemplify the transformative impact of our initiatives across our intervention area. This publication showcases the achievements across our four key project areas including watershed protection and climate-resilient agriculture, sustainable forest management and sustainable energy, and climate resilient settlements. Through these stories, we aim to foster knowledge sharing and exchange, highlighting the tangible benefits and innovative solutions driving environmental sustainability and community climate resilience.

This e-magazine serves as a testament to the dedication and collaborative efforts of all stakeholders to promote climate resilience through a range of interventions across the nine Sectors in Gicumbi District. By sharing the success stories of our beneficiaries, we aim to inspire further action to support vulnerable communities to adapt to the effects of climate change as well as spur replication and good practices in tackling climate change.

In the last five years, our efforts in watershed protection have resulted in significant improvements in reducing soil erosion and enhancing agricultural productivity. By implementing integrated watershed management practices, we have empowered local communities to adopt climate-resilient agriculture practices, and sustainably manage their land resources, ensuring long-term ecological balance and improved livelihoods. For instance, to date, the project has established radical terraces on 1,450 Ha including 600 Ha of radical terraces and 850 Ha of progressive terraces, planted upland tea on 50Ha, upland coffee on 40 Ha as well as 7,410 Hectares of land planted with agroforestry and 1,356 hectares of land established with protective forestry on roads and hillsides.

According to the annual seasonal assessment report (Season B 2024) within the intervention areas, the overall seasonal production for Maize has increased to 17% compared to the baseline. For instance, the average beans production in all 9 sectors has increased to 25% since the project started as a result of improved seeds and the use of fertilizers whereas the average Irish potato production in all project interventions so far has also increased to 22% compared to the baseline. Furthermore, the wheat production in all sectors of

project intervention has increased to 9% compared to the baseline production.

Our efforts towards sustainable forest management also illustrate our commitment to environmental protection, improved economic community livelihoods, and enhancing carbon sequestration. On this, 1,250 Hectares of degraded forests were renewed with quality tree seedlings, and 28,000 improved cookstoves were distributed to vulnerable households.

Through community-based forest management programs, we have promoted sustainable forest management practices and forest rehabilitation efforts. These initiatives have not only preserved natural resources but also provided long-term economic opportunities for local populations.

Furthermore, the impact created in this area highlights our commitment to promoting clean energy to reduce communities' high dependence on firewood. This was done through the distribution of improved cookstoves, biogas production, and energy-efficient initiatives such as institutional large stoves. These initiatives have thus improved energy access, reduced greenhouse gas emissions, and fostered economic growth.

Further still, as a result of project interventions across the different components, significant progress has been realized towards carbon emission reduction. To date, emissions reduction has been achieved within different interventions, including AFOLU at 60,023 tCO<sub>2</sub>e, Mulindi Tea Factory at 12,963 tCO<sub>2</sub>e, and energy-efficient interventions at 35,026 tCO<sub>2</sub>e hence, the annual cumulative total of emission reductions standing now at 108,011 tCO<sub>2</sub>e.

Lastly, our work on climate-resilient settlement has focused on building adaptive capacity and enhancing infrastructure resilience by supporting the already-victims of climate change in Gicumbi District. To date, 289 household rainwater harvesting tanks were constructed, harvesting 867 m<sup>3</sup> capacity, and 139 cisterns and underground rainwater harvesting tanks, harvesting 4,125 m<sup>3</sup> capacity.

Lastly, it is worth noting that at our 5th year of implementation, we have created more than 38,000 green jobs and reached 148,843 direct beneficiaries including 45% of women and 55% of men whereas the number of indirect beneficiaries reached is 469,567, of which 52% are women.

# “FOR THE FIRST TIME, I FEEL AT PEACE AND SECURE”: MEET MUKABAHIZI AND MBONIGABA RELOCATED FROM HIGH-RISK AREAS

Due to its predominantly hilly terrain, in past years, the Gicumbi District was one of the areas often affected by the consequences of climate change, especially landslides and floods. These caused many dangers, including the loss of life of residents living in hazardous areas, and largely those of low income.

The story of Joyeuse Mukabahizi and Benoit Mbonigaba is one that illustrates the image and severity of the significant risks associated with the losses of climate change that have affected the people of Gicumbi in past years.

Mukabahizi previously lived in a modest house located on a steep slope in Gicumbi. She and her family lived an ordinary life, but it changed when their house was destroyed by a landslide caused by heavy rain that fell within a few minutes.

With a voice filled with emotion from her memories, Mukabahizi said, “I woke up to the loud noise of our house collapsing on us. Fortunately, none of us died.” From then on, Mukabahizi and her children spent weeks living in a shelter provided by the authorities.

The anxiety and worry turned into joy when Mukabahizi and her family learned that they were among those who would be resettled by the Green Gicumbi project in the buildings it was constructing.

With a face beaming with great joy, standing in front of the house she now lives in, Mukabahizi said, “We now live well, in a nice house, in a modernly built village. For the first time in many years, I feel at peace and secure.”

Mukabahizi now resides in the new village of Kaniga, constructed by the Green Gicumbi project with the support of the Global Climate Fund (GCF). This village is home to 60 underprivileged families with histories similar to Joyeuse Mukabahizi’s.



**Mukabahizi Joyeuse**  
in her modern house constructed by Green Gicumbi Project

Like her neighbors in the Kaniga village, Mukabahizi says her children now go to school without any problems, where they are no longer worried about whether they will find their house still standing when they return from school, due to fears of being swept away by landslides.

Benoit Mbonigaba is another elder, aged 72. His story is also bitter. This farmer also lost his house and everything in it to a landslide. He said, “Everything I worked for over the years, vanished in the blink of an eye. We had nowhere to turn. My family and I sought a place to live, where we lived a difficult life.”

In a calm voice, Mbonigaba said, “We moved from wondering if we would survive to thinking about a better tomorrow. Green Gicumbi not only gave us houses but also gave us hope to live again.”



In a closing speech that also expressed gratitude to the government and partners, Mbonigaba said, “We have gone beyond being called neighbors; now we are called one family.”

The story of Mbonigaba, Mukabahizi, and the activities of the Green Gicumbi project clearly demonstrate what can be achieved when there is cooperation, determination, and the establishment of a unified program to protect the citizens, especially those of low income.

## GREEN ASPECTS OF THE SETTLEMENT

The community settlement was designed and built with sustainability at its core, ensuring that environmental conservation was prioritized at every stage of construction. The houses were constructed in a modern way using locally sourced, eco-friendly materials, minimizing the impact on natural resources. Special care was taken to use materials that do not contribute to deforestation or degradation of the environment. The village also features well-planned infrastructure for managing water resources. All water in the community—whether rainwater from the roofs or runoff from the ground—is collected through an advanced system of underground tanks, ensuring that no drop is wasted.

### Effective Water Management

The project incorporates a comprehensive water management system that not only conserves water but also reuses it for beneficial purposes. Rainwater collected from the roofs is directed into underground tanks and later used for household cleaning and agricultural activities like irrigation. This reduces the community’s reliance on external

water sources and ensures resilience during dry periods. The settlement’s toilets are built with innovative designs that turn human waste into organic fertilizer, providing nutrient-rich compost for farming while reducing pollution.

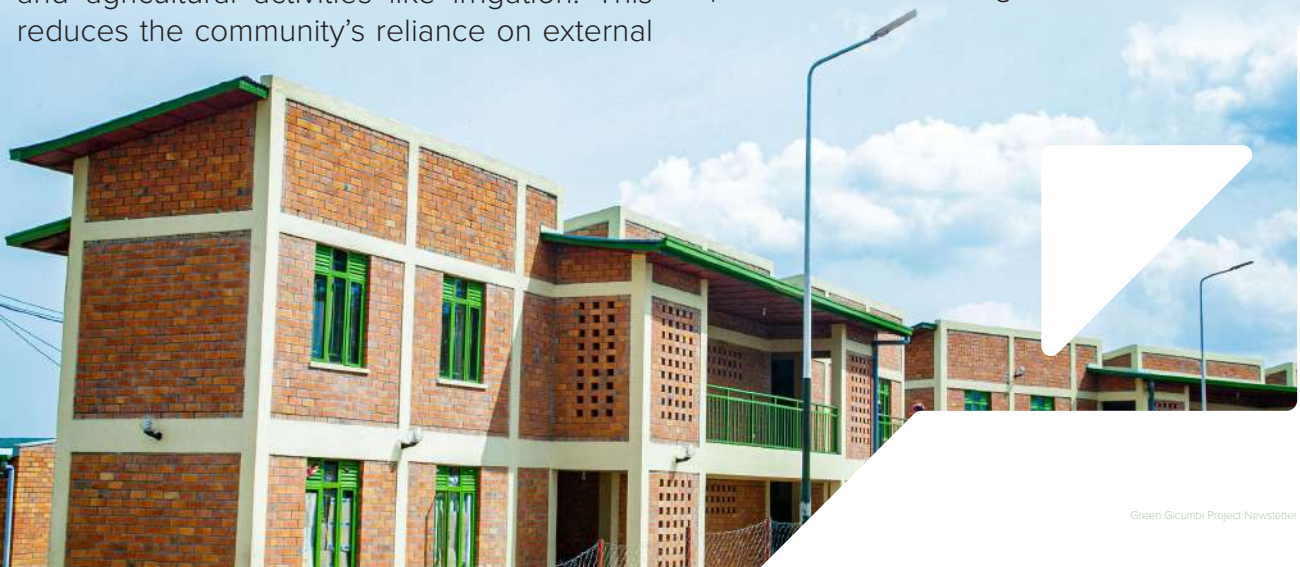
### Energy Efficiency

The settlement embraces renewable energy by relying on solar power to meet its lighting needs. Solar panels installed on the houses harness the sun’s energy to provide consistent and sustainable electricity for the entire village.

Additionally, each household is equipped with improved cookstoves that are not only more efficient but also environmentally friendly. These stoves reduce firewood consumption by up to 60%, leading to less deforestation and lower emissions, which helps to protect the surrounding forests and reduce air pollution.

### Effective Waste Management and Greening Efforts

To complement the green design of the settlement, a comprehensive waste management system is in place. The community is actively involved in recycling and composting organic waste, turning it into valuable resources for agricultural use. The village has also been adorned with a variety of trees, including agroforestry species, ornamental plants, and protective trees that enhance biodiversity and improve the local ecosystem. These trees provide shade, improve soil health, reduce erosion, and offer additional benefits such as fruits and firewood. This holistic approach to settlement design demonstrates the potential of integrating sustainability into rural development and sets a precedent for future green communities.



# A DEEP DIVE INTO PROJECT CLEAN ENERGY INTERVENTIONS: POSITIVE CHANGE CREATED BY DISTRIBUTED IMPROVED COOKSTOVES AND BIOGAS



Like in other parts of the country, the Gicumbi District is one of those where residents rely on firewood as a means to cook in their daily lives. This, as known, has significant impacts on forest degradation and also causes soil erosion.

However, the severity and extent of this issue are not as pronounced in the Gicumbi District compared to other parts of the country, thanks to the role of the Green Gicumbi Project in helping the residents of this area find cooking methods that do not use excessive fuel.



**Antoine Ndengeye**  
standing near his Biogas

The distribution of fuel-efficient stoves and the construction of biogas units have been confirmed by the residents to be a solution for them. The Green Gicumbi Project has distributed 28,000 fuel-efficient stoves among the residents of the Gicumbi District and has also built 10 pilot biogas units.

Gaudiose Mukantwari, a mother of five, said, “Before I was given a stove, I used to spend

many hours searching for firewood to cook for my family. The smoke from the firewood would cause respiratory diseases, resulting in the children getting sick. But now, the stoves we were given cook quickly and well. There is no longer smoke filling our home when we cook.” Mukantwari adds that “Now we use very little firewood, which helps me find time to be with my family and do other profitable work.”

Antoine Ndengeye is also one of those who appreciate the benefits of biogas. He said, “Having biogas in our home has been a tremendous blessing. We use waste and manure to make ‘Gas’ for cooking. It’s really good and has made things much easier for us. We no longer need to use a lot of charcoal and firewood, which would lead us to cut down trees.”

Ndengeye adds that their kitchen is always clean. “My wife no longer coughs much while cooking. Also, the residue left after using biogas is utilized as fertilizer for our crops. We wouldn’t trade biogas for anything.”

## How these stoves are made

The stoves provided by the Green Gicumbi Project are designed in such a way that heat does not escape quickly when someone is cooking, which reduces the amount of firewood used by up to 50%. This has significantly reduced the amount of firewood families use for cooking. It is also expected to ensure the sustainable management of Gicumbi’s forests, including those rehabilitated by the Green Gicumbi Project. The project has rehabilitated forests on over 1,500 hectares.



### **Additional benefits**

The benefits of using fuel-efficient stoves and biogas are not limited to forest conservation but also significantly contribute to enhancing educational opportunities, especially for girls, as it allows them to study without interruption, based on the cultural norm of caring for the family and cooking.

Undoubtedly, this has also played a role in helping women in general find opportunities to ease the way to other profitable work since they are no longer consumed by the time-intensive task of cooking for their families. This will contribute to the ongoing development of the residents and ensure a better future, bringing positive changes to families throughout the areas where the Green Gicumbi Project operates.





# EMPOWERING YOUTH THROUGH SUSTAINABLE AGRICULTURE AND ECONOMIC PROSPERITY

It is often said that many young people do not engage in agriculture because they doubt its potential to generate monetary profits and be a viable investment. However, this perception is different among the youth in Gicumbi District.



**Emile Bahimana**, the vice president of Abahuje Imbaraga Cooperative

A tangible example is the youth involved in the cooperative named Abahuje Imbaraga in Mukarange sector. They have been assisted by Green Gicumbi to invest in producing traditional organic fertilizer and vermicompost.

## A Catalyst for Change

After receiving training on how to produce organic fertilizer, its benefits in increasing agricultural yields, combating climate change, and its profitability, these young people decided to venture into this business.

Alex Ndagijimana, a member of this cooperative, shares that their story is about courage and innovation. He said, “Initially, I had many doubts. However, the Green Gicumbi project team explained to us how producing organic fertilizer is a profitable business. I immediately joined the cooperative with my peers, and we started producing fertilizer on a larger scale.”

Ndagijimana adds, “Currently, our cooperative sells fertilizer throughout Gicumbi District. We are exploring partnerships with other businesses related to ours. The knowledge I gained from this program has given me confidence to set goals and build a better future.”

Besides being a significant investment for the cooperative, the fertilizer also plays a crucial role in helping members practice profitable and climate-resilient farming. Emile Bahimana, the vice president of Abahuje Imbaraga Cooperative, describes how life was before they started producing organic fertilizer. He said, “Before, it was challenging to make a living from my small farm. The soil was exhausted, and crops did not grow well.

However, the training we received brought a change. Now, I know how to make organic fertilizer and use it to nourish my crops.” Bahimana mentions that their yields have more than doubled, and he even sells surplus fertilizer to neighbouring farmers, thus earning additional income.



Members of Abahuje Cooperative at the Compost Site

## Benefits to Members

Abahuje Imbaraga Cooperative is one of the beneficiaries of the Community Adaptation Fund (CAF), receiving over 30 million Rwandan Francs after their project was selected among the best.



The cooperative affirms that this was the foundation for their development and that of its members.

Producing organic fertilizer is seen as a profitable investment, enabling some members to continue their higher education and others to start additional income-generating activities. Statistics show that out of the 38,806 jobs created by the Green Gicumbi project, nearly half were taken by young people. This illustrates the opportunities this project has provided in advancing the development of Gicumbi's youth.

The story of Abahuje Imbaraga Cooperative demonstrates how producing organic fertilizer can be a profitable venture and significantly contribute to advancing Rwanda's agricultural sector, aiming to enhance resilience to climate change impacts.

The Green Gicumbi project's initiative to help youth engage in agriculture is an exemplary strategy that should continue to be supported to encourage young people to capitalize on opportunities in agriculture, fostering their development and transforming their lives.





# UNPRECEDENTED CHANGE IN BEEKEEPING SECTOR: THE STORY OF GICUMBI'S BEEKEEPERS

The beekeeping sector is one of the most affected by the impacts of climate change. Frequent weather fluctuations and the lack of modern beekeeping techniques are among the top reasons causing this sector to face losses and failing to sustain the livelihoods of those engaged in it.

Despite this, beekeepers in the Gicumbi District praise the Green Gicumbi project for helping them make significant changes in their beekeeping activities, enabling them to reap better benefits. Through support provided by the Rwanda Green Fund under the Community Adaptation Facility (CAF) program, beekeepers are delighted with their progress in expanding their beekeeping activities and building resilience to cope with the impacts of climate change.

The GHCPROCO Beekeepers Cooperative, consisting of 23 members, confirms that before working with Green Gicumbi, they faced numerous challenges, including limited knowledge and poor honey yields. The support they received included continuous and extensive training as well as beekeeping equipment, including modern beehives and other necessary tools.

Celestin Munyankindi, President of the Gicumbi Honey Collection and Processing Cooperative (GHCPROCO), affirms that the support from Green Gicumbi has been a significant catalyst in revitalizing the beekeeping sector in Gicumbi District as a whole.

He stated, "Before the support, our production was very low. The new modern beehives and the training we received have helped us immensely. Now we harvest twice a year, and the quality of our honey has also improved. Our income has increased, enabling us to support our families."



**Celestin Munyankindi**, President of the  
Gicumbi Honey Collection and Processing  
Cooperative (GHCPROCO)

Munyankindi notes that one of the major challenges faced by beekeepers in Gicumbi District was finding a place to properly process their honey, but this issue has now been resolved.

He said, "We no longer worry about where to process our honey. We now have a facility that helps us store honey even during cold weather, allowing it to maintain its natural quality."

Munyankindi adds that overall, the training farmers received from the Green Gicumbi project on climate-resilient farming, including lessons on integrated pest management (IPM), has increased the chances of keeping their bees alive, reducing dependency on industrial pesticides.

Additionally, members of beekeeping cooperatives were trained on how to engage in other supplementary activities, allowing them not to rely solely on beekeeping for their livelihood.







# CHANGES IN SEED MULTIPLICATION: EMOTIONS OF COOPERATIVES SUPPORTED THROUGH COMMUNITY ADAPTATION FACILITY

KOTEMIKA is one of the cooperatives in the Kaniga sector of Gicumbi District known for its agriculture profession, but especially focuses on the multiplication of agricultural seeds.

Through the CAF program, this cooperative received nearly 70 million Rwandan Francs in support to carry out various activities centered on the multiplication of seeds that are resilient to climate change.

This cooperative particularly emphasizes on multiplying potato and wheat seeds, as these were some of the seeds that farmers in the Gicumbi district struggled to obtain, often having to source them from other districts and even from foreign countries, especially Uganda.

This cooperative particularly emphasizes on multiplying potato and wheat seeds, as these were some of the seeds that farmers in the Gicumbi district struggled to obtain, often having to source them from other districts and even from foreign countries, especially Uganda.

Now, KOTEMIKA is helping farmers in the Gicumbi District solve this problem. Annonciata Ntamukunzi, a member of this cooperative, says that after collaborating with the Green Gicumbi project, their cooperative has become stronger and has expanded its activities.



Members of **KOTEMIKA** Cooperative standing in front of their Store

Diane Uwiduhaye, an agriculture officer at KOTEMIKA, said, “The knowledge we gained through the CAF training program has helped us better cope with the effects of climate change. We have been able to share the benefits and knowledge we acquired with others in our community.”

Through the CAF support, 25 cooperatives were directly funded by the CAF program, but a total of 42 cooperatives benefited from the broader training and study tour program.



All these cooperatives show that the support they received was a significant contribution to their development, aimed at helping members change their lives and better cope with the impacts of climate change.

The history and role of the CAF support, which was initially funded by the World Bank and channelled through the National Fund for Environment, and implemented in the areas where the Green Gicumbi project operates, is a good example that reinforces the effective way of helping citizens build resilience to climate change

and solve various problems still evident in the field of agriculture, which sustains a large number of Rwandans.

The story of KOTEMIKA Cooperative, along with other cooperatives assisted by Green Gicumbi through the CAF, should serve as a good example for others in terms of striving for the development of cooperatives, especially since after using the support it received well, it was able to expand its markets, change the lives of its members, and broaden its agricultural activities.



# HOW COFFEE UPLIFTED WOMEN OF BWISIGE SECTOR AND REINFORCED GENDER EQUALITY

Historically, in Rwanda's cultural past, coffee has often been regarded as a man's crop. This notion meant that, as a cash crop, men were predominantly the ones involved in its cultivation, consequently controlling the income derived from it.



Marie Mukaruyenzi harvesting Coffee

However, this perspective has changed, with both men and women now participating in coffee farming. A nearby example is in the Bwisige sector, where the Green Gicumbi project cultivated coffee on 40 hectares of land, involving 137 members including 101 men and 36 women.

Female coffee farmers in this area affirm that the crop has significantly contributed to the development of their households and promoted the principle of gender equality and cooperation in general.

Marie Mukaruyenzi is one of the coffee farmers. She said, "Before starting to grow coffee, I used to farm other crops, but I did not get any yield from them. It was a big problem because it meant that, as women in this area, we always depended on our husbands to provide for our daily needs."

However, since the Green Gicumbi project started planting coffee in the Bwisige sector, women assert that the crop has changed people's mindsets, who previously thought of it as a man's crop. Due to embracing coffee farming, Mukaruyenzi and her colleagues say that coffee has boosted women's confidence and given them value in their families because they now contribute to their households' development.

She said, "The money I got from coffee, I bought two plots of land, and I plan to buy another coffee plot. I also bought a cow and renovated the house we lived in. This made me appear as a person who contributes to the household's development."

Angelique Muhawenimana, 29, is another woman who started growing coffee. She says that because of coffee, she can now buy whatever she needs without waiting for her husband to provide for her. "Coffee has brought me many things. My husband and I both got jobs through the project. We built a nice house, paid school fees for our children, and bought livestock. We have two cows, goats, and sheep. But before, our farming yielded nothing."

Besides reinforcing the principle of gender equality and bringing development, these women affirm that coffee has also helped solve the problem of migration, as families in this area now have a source of income for their needs. Marie Therese Uwingabire said, "Before, people used to migrate to other areas like the east to look for a livelihood. But now this has changed. Now, a person can earn around 60,000 RWF every week."

# HOW BARLEY BECAME A HOT COMMODITY FOR FARMERS IN GICUMBI DISTRICT

To support farmers in the Gicumbi district in improving agriculture and combating the effects of climate change, the Green Gicumbi project introduced barley cultivation three years ago. This type of barley is known for its use in brewing Heineken beer and its resilience to climate change. Previously, traditional wheat was cultivated in the Gicumbi area, but it often faced climate-related issues, resulting in poor yields. To address this, the Green Gicumbi project encouraged farmers to start growing the new barley variety used for brewing Heineken.

Soon after, this barley began to be cultivated in Gicumbi. Farmers now report that this new barley variety has become a hot commodity due to its high yield and profitability compared to traditional wheat and other crops.

Alphonsine Mukarusine, president of the TWIGIRE MANYAGIRO cooperative, one of the groups that adopted this new barley, said they used to grow crops like potatoes and beans without significant yields. However, after consolidating land and planting the new barley seeds provided by Green Gicumbi, their harvests improved dramatically.

She said, “From growing this new barley, I earned 400,000 Rwandan francs. This allowed me to pay school fees for my children and buy another plot of land.” Farmers initially wondered where they would sell this new barley.

The Green Gicumbi project quickly arranged an agreement with Bralirwa, a beverage company, to purchase the farmers’ barley, as the company requires this variety for brewing Heineken. These farmers now have a steady market for their produce, with annual contracts with Bralirwa, which buys their barley.

Joel Kijyana stated, “Farming with the assurance of a market for our produce is unmatched! This motivated us to continue cultivating this barley variety. The money we earn helps us improve our livelihoods.”

Marie Aimee Ingabire, a Bralirwa employee responsible for working with local partners, said that partnering with local barley farmers is a significant opportunity



A barley farmer in Manyagi Sector

because it reduces the company’s costs of importing barley. She stated, “Working with local barley farmers aligns with our company’s goal of self-sufficiency in brewing ingredients. This also helps protect the environment by reducing the carbon footprint associated with importing these products.”

Currently, five cooperatives work with the Green Gicumbi project to grow this new barley variety for Heineken beer production. These include KOJYAMUMU in Mukaranga, Twigire Muhinzi in Manyagi, KOPABIMU in Rushaki, and KOTEMIKA in Kaniga.



# HOW THE AVOCADO TREES TRANSFORMED HARERIMANA'S LIFE

Harerimana Vincent is a farmer from Rushaki Sector, one of the nine sectors where the Green Gicumbi project operates. Two years ago, Harerimana planted 200 avocado trees on his one-hectare farm. This was part of the Green Gicumbi project's initiative to encourage farmers to plant trees intercropped with crops as a way to help them improve their livelihoods and build resilience to climate change.

Originally, Harerimana already liked growing avocados, but after the arrival of Green Gicumbi, he intensified his avocado farming and turned it into a profession. Now, he has started harvesting the avocado trees planted by the Green Gicumbi project. He said, "Previously, I could harvest around 500 kilograms of avocados. But now my yield has doubled. I can earn a steady income of 100,000 Rwandan Francs every month. "As a rural resident, Harerimana confirms that this is a significant amount of money for him, as it helps him support his family and meet all their needs, as well as expand the land on which he farms in general.

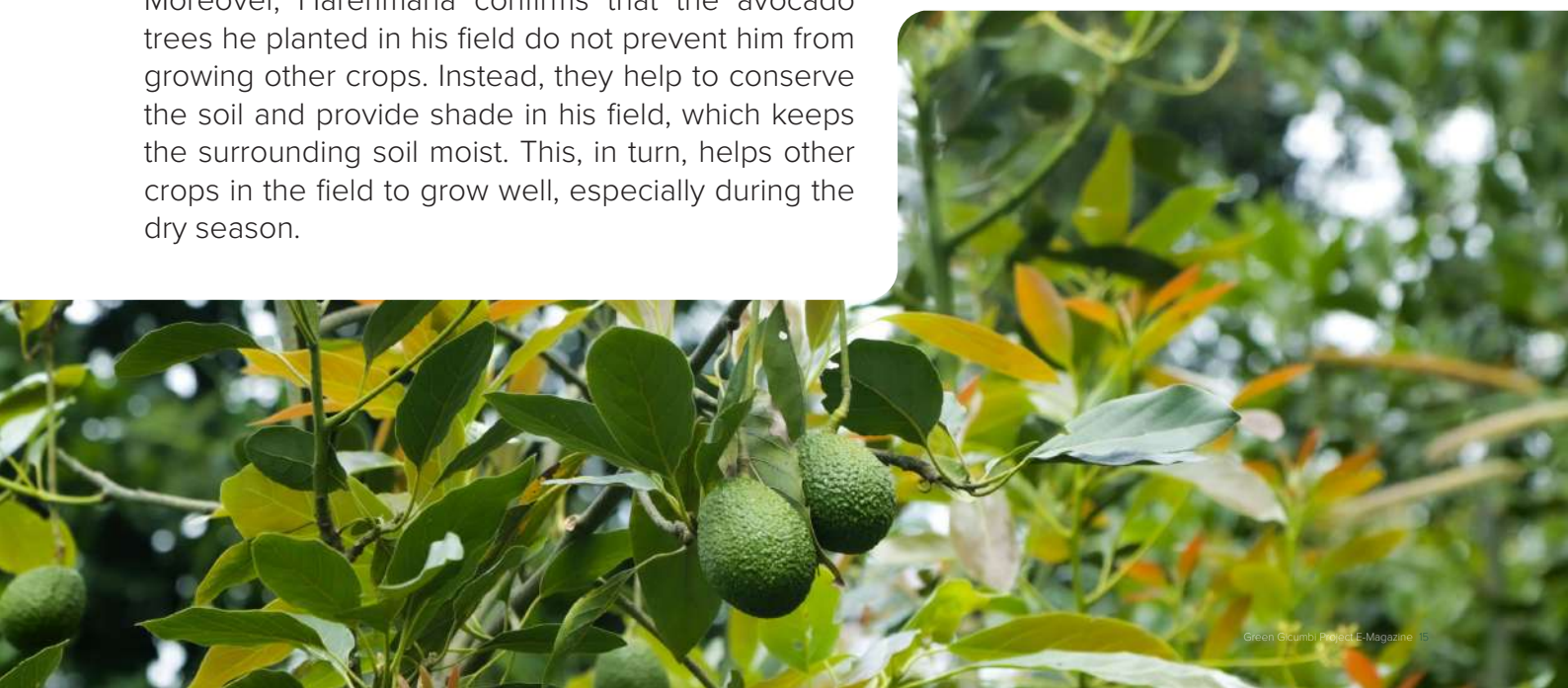
This farmer believes that the yield he gets from avocado farming will continue to increase because the trees planted by Green Gicumbi have just started bearing fruit. Thus, as they grow, so will the yield.

Moreover, Harerimana confirms that the avocado trees he planted in his field do not prevent him from growing other crops. Instead, they help to conserve the soil and provide shade in his field, which keeps the surrounding soil moist. This, in turn, helps other crops in the field to grow well, especially during the dry season.



**Harerimana Vincent**  
Avocado Plantation

Harerimana's story is one of many that highlight the benefits of investing in planting trees intercropped with crops, especially fruit-bearing trees, to further enhance the development of rural residents and help them build resilience to the impacts of climate change.





# EMBRACING FFS FOR FARMERS' INCREASED RESILIENCE TO CLIMATE CHANGE



FFS Members at the Farming site

Before the Green Gicumbi project started its operations in Gicumbi District, the farmers there faced challenges of low agricultural productivity, primarily due to soil erosion on the steep slopes during the rainy season and other issues caused by climate change.

For this reason, besides implementing various programs aimed at combating soil erosion on the steep slopes in the project areas, Green Gicumbi established Farmer Field Schools to help farmers gain knowledge on climate-resilient agriculture.

In Byumba sector, one of the nine sectors where the Green Gicumbi project operates, the Duhuzimbaraga cooperative, which primarily grows beans, potatoes, and maize, is one of the places where the Farmer Field Schools have taken root.

Alphonsine Dushimiyimana, a member of this cooperative, says that the school has become a valuable tool that has helped her and her colleagues gain knowledge on different farming practices that are resilient

to climate change. This includes learning how to build terraces as a way to combat soil erosion, understanding crop rotation, integrating trees with crops, and identifying and combating crop diseases and pests.

“The Farmer Field School has been a catalyst for change in our farming practices. Previously, our agricultural output was very low. But now, through the school, we apply the knowledge we have gained and achieve good yields for every crop we plant,” she says.

Similarly, Emmanuel Sindikubwabo confirms that the Farmer Field School has been a solution. He says that now they no longer farm just to have food to eat, but have turned it into an activity that generates income by being self-sufficient in food and having surplus to sell in markets.

“Before, our farming was chaotic. Our crops were mixed up in the fields, resulting in low yields. In short, our farming was haphazard. But now, we do it in a more advanced way,” he says.





# HOW COFFEE CHANGED THE LIVES AND LIVELIHOODS OF THE RESIDENTS OF BWISIGE

Bwisige is one of the 21 sectors that make up Gicumbi District. Like other parts of the district, Bwisige is characterized by tall mountains inhabited by residents who depend on farming activities for their livelihood. Here, residents show the changes brought about by mountain coffee that withstands climate changes, planted by the Green Gicumbi project four years ago.

Like other parts of the region, farmers in this area were severely affected by soil erosion. Some plots of land had been abandoned because every time they tried farming, they failed to yield crops. Mount Gihuke is one such place. However, it now has a new history. Four years ago, 40 hectares of mountain coffee were planted here, which can endure climate changes. Alexis Ndinabo is one of the farmers who benefited from this coffee. “Our lives have changed a lot.

In a short time, after harvesting this coffee, I managed to buy three goats, whereas before, we only grew beans here, which did not yield much.” Ndinabo asserts that thanks to this coffee, he moved out of poverty. “Now, I can afford to support my family. When I harvest, I make 3,000 Rwandan francs a day, whereas before, even getting 700 francs was difficult.”

Another farmer, Marie Therese Uwingabire, says, “Before, we had many doubts because coffee was a new crop for us. But now, it has changed our lives. I can earn 60,000 francs every week. This is the first time such a thing has happened in my life.

“ The Dutubure Kawa Gihuke Cooperative consists of 137 members. This is the third time these farmers have harvested their coffee. Figures show that in the last harvest season, they harvested 600 tons, generating nearly 250 million Rwandan francs. This season, these farmers expect their yield to increase as their coffee plants continue to mature and produce more.

The coffee planted by Green Gicumbi has generally not only helped improve the residents’ lives but also equipped farmers with knowledge on new practices to combat climate changes. This includes learning methods to fight plant diseases and pests using integrated pest management (IPMs), mulching crops, weeding, and controlling soil erosion in the fields.

“We are proud that with our coffee, we use integrated methods to fight diseases and pests. This makes us feel that we also have a role in protecting the environment,” says Angelique Muhawenimana, another coffee farmer.





# KANIGA TEA FARMERS THRIVE THROUGH MUTUAL BENEFITS

If you live in Gicumbi District or frequently visit, you probably know that this district is one of the regions in the country known for growing tea, a key cash crop. The Mulindi marshland is one of the well-known areas for tea cultivation.

In case you weren't aware, Gicumbi District is home to the Mulindi Tea Factory, the first factory of its kind in Rwanda, established in 1960. Despite this, tea farmers in the Mulindi marshland have often faced significant losses due to the effects of climate change. Floods have frequently hit this marshland, causing the tea plants to dry up.

Statistics show that in the past 10 years, over 250 hectares of tea have dried up due to flooding issues in the marshland, leading to a substantial loss for the farmers and the country as a whole.

To help farmers tackle this problem, the Green Gicumbi project has started encouraging them to try growing tea on the hills as a way to combat flooding issues and prevent losses. This initiative also involves other activities aimed at conserving the surrounding hills, focusing on erosion control measures.

On Kaniga Hill, the Green Gicumbi project planted tea on 50 hectares belonging to local residents. This tea is particularly resistant to the impacts of climate change. Tea farmers on this hill have noted that this tea has transformed their lives and helped them in their fight against soil erosion.

Cesarie Bavugirije is one of the over 500 farmers who had tea planted on the hill three years ago and is now harvesting it. She said, "We were very surprised to see that it was possible to plant tea on the hill. Previously, we suffered huge losses because our tea in the Mulindi marshland was affected by floods, causing us to incur losses.

But now, that will no longer happen. "She added, "I have already bought goats, and they provide me with manure for my fields. I also plan to buy a cow in the near future. I owe all of this to my tea.



**Alphonsine Mukarwego**  
A tea farmer in Kaniga Sector

"Alphonsine Mukarwego is another tea farmer. She said, "Previously, on this hill, we only grew sorghum and beans, but even those didn't yield well because the rain would wash them down into the marshland. But now, we grow tea, and floods will no longer affect it.

Additionally, this has helped us combat erosion in the Mulindi marshland because the hill is now protected with erosion control measures and the tea itself stabilizes the soil. "Specifically, this tea helps residents earn an income to support their families, work with financial institutions, and engage in other profit-generating activities, thereby building sustainable development for themselves.

The cultivation of hill tea is a good example of possible solutions that bring integrated changes and address issues stemming from climate change, with a strong focus on activities that improve the lives of the community.



# SUSTAINABLE ENERGY USE: DISCOVER THE BENEFITS OF LARGE STOVES

Schools in the Gicumbi District are celebrating the changes resulting from the use of large stoves provided by the Green Gicumbi Project as part of a program to assist in the sustainable use of energy, aimed at reducing fuel consumption. These schools confirm that this program has played a significant role in easing the previously used methods of cooking for students and has also helped to promote a culture of environmental conservation and protection within the schools.

## **The Impact**

Before the Green Gicumbi Project distributed 70 large stoves to educational institutions in the Gicumbi District, the schools say they used traditional wood-burning methods for cooking student meals. This led to a high level of fuel consumption and also had an impact on the health of the cooks and others in general due to the excessive smoke produced by the wood. In addition, the schools acknowledge that they used to spend a significant amount of money on purchasing wood for cooking student meals, which prevented other important activities essential to the life of the institution from taking place.

However, after receiving these large, fuel-efficient stoves, this narrative has changed. The schools are pleased that besides the ability of these stoves to cook large quantities of food at once compared to what they had before, they also use much less wood, by about 60%.

Not only has this eliminated the financial losses schools suffered due to spending a lot of money on wood, but it has also reduced the burden on students who had to help carry wood for cooking, and generally, the number of employees doing this work has decreased.

The Bursar of the Anglican School of Byumba (EAR Byumba), Mr. Raymond Shingiro, is one of those who expressed the joy their school felt after receiving a fuel-efficient stove.

He said, “The money we used to spend on buying wood to cook for our students went from 700,000 Rwandan francs to 400,000. This has allowed us to find other ways to carry

out activities aimed at bringing changes in education and the well-being of our students.”

He added, “The use of these large, fuel-efficient stoves has not only changed the way of cooking in our kitchen but has also instilled in us a culture of feeling that we should contribute to environmental protection and prevent air pollution.”

This sentiment was echoed by his colleague from Inyange High School, Ms. Esperance Nyirabahire, who said, “The method of cooking for our students has now become easier and there are no more health issues. These stoves work very well. We are relieved!”

## **A model for future Projects**

The changes brought about by the use of large, fuel-efficient stoves in the schools of the Gicumbi District should serve as a good example for other projects in thinking about better ways to use energy sustainably in order to support the country’s environmental protection program and to cope with the effects of climate change.

This approach should also continue to be promoted in order to assist the education sector in the country, whether it be schools solving the problem of the budget used to purchase wood fuel, and on the other hand, this program could play a significant role in instilling in the young a culture of further protecting the environment as part of building sustainable development.





# APPRECIATION MESSAGE

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# THANK YOU!

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