DGM GHANA

Solidaridad

THE 'GHANA DEDICATED GRANT MECHANISM FOR LOCAL COMMUNITIES' PROJECT

VOICES FROM THE FIELD

OUR IMPACT STORIES

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ABOUT THIS PUBLICATION

This publication echoes the voices of individuals, communities and community-based organizations who share their experiences as beneficiaries of the Ghana Dedicated Grant Mechanism Project (G-DGM). It demonstrates how the World Bank-funded project has promoted the active participation of 53 local communities in activities to help reduce deforestation, forest degradation and the impacts of climate change.

Through the DGM project, which was implemented by Solidaridad West Africa, over 17,000 individuals (52 percent are women) from the Western North, Bono and Bono East regions are now climate-aware and climate-smart.

Additionally, the project provided grants to communities, individuals and community-based organizations to fully implement small-scale, climate-smart sustainable initiatives.

Generally, the initiatives implemented by individuals and local communities included agroforestry, communal reforestation, tree planting along water bodies, the construction of solar-powered mechanized boreholes and streetlights, and cashew plantation.

Close to half a million trees were planted on individual and community lands across the 53 communities.

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BACKGROUND AND INTRODUCTION

Created as a special window under the Forest Investment Programme (FIP), the Ghana DGM project was designed to promote the inclusion of forest-dependent communities in policy formulation and initiatives that seek to reduce deforestation and degradation. The Ghana DGM project strengthened the capacity of local communities to participate effectively in FIP and REDD+ processes and created livelihood opportunities that also generated benefits of mitigation and adaptation while respecting culture, traditional knowledge and indigenous forest management systems.

The project was implemented around three components.

Component 1: Capacity Building and Institutional Strengthening

The key thrust of the project was the dissemination of knowledge to increase communities' understanding of how unsustainable practices heighten their vulnerabilities by contributing to climate change, its adverse effects on their livelihoods as well as ways to reduce deforestation and climate impacts.

The principal means of meeting this need was through training to strengthen the capacity of beneficiaries.

Component 2: Sustainable and Adaptive Community Initiatives

The capacity building was followed by the demand-driven provision of small grants to local individuals, communities and community-based organizations to put into practice what they have learned. This helped the beneficiaries to better understand the linkages between the knowledge they had acquired and the investments and practices they engage in on the ground.

Component 3: Project Management, Monitoring and Evaluation

This component was related to supporting the effective governance, monitoring and evaluation of the project.

Project Operational Areas

The Ghana DGM project acted in synergy with other projects implemented under the Ghana Forest Investment Programme; and it was implemented in 53 communities in the Western North, Bono and Bono East regions, where FIP is largely operational.

In the Bono and Bono East regions, the project operated in 31 local communities while in the Western North region, it was active in 21 communities to create awareness of REDD+ practices and support them to implement initiatives that restore their degraded landscape.

Bono and Bono East Regions

The Bono and Bono East regions were formerly part of the erstwhile Brong Ahafo region. With a population of over 900,000 over 60 percent are rural dwellers (Brinkhoff, 2019).

The regions share the same vegetation, geographic and climatic conditions with yam and cashew being the dominant crops cultivated. The landscapes are characterized by moist semi-deciduous forests as well as transitional and guinea savannah zones.

Sadly, the structure and function of these landscapes are threatened by a spate of unsustainable practices. Poor land-use practices such as extraction of fuelwood from forest areas, illegal logging, conversion of forest lands to agricultural lands, have doubled the rate of tree cover loss to 8 percent between 2011 and 2018 (Buttler, 2019).

Western North Region

Originally part of the Western region, the Western North region has a population of 711,435 with 79.2 percent as rural folks who are mainly cocoa farmers (Brinkhoff, 2019).

The region has two municipal assemblies - Aowin and Bibiani-Ahwiaso-Bekwai - as well as seven districts including Bia East, Bia West, Bodi, Juabeso, Sefwi Akontombra, Sefwi Wiawso and Suaman.

The vegetation type is predominantly deciduous forests with patches of moist evergreen. Similarly, this region is fast losing its forest resources to human activities such as logging and agricultural expansion. Since 2010, tree cover loss has increased from 7 percent to 11 percent between 2000 and 2018 (Buttler, 2019) – a situation that worsens the climate crisis in the country.

To curb this ongoing trend of deforestation, an urgent and concerted effort is needed to reform the practices of communities dependent on forest resources and build their resilience to climate change.

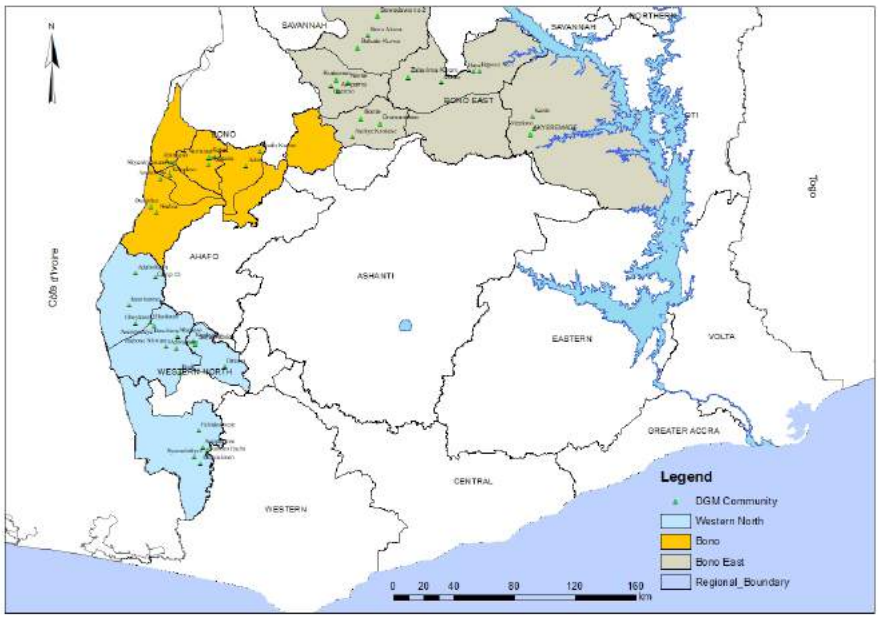


Figure 1. DGM project communties and their respective districts across the three regions

COMPONENT ONE

Capacity Building for Local Communities

DISSEMINATING KNOWLEDGE

The first component of the project focused on capacity building for local communities. The key thrust was the dissemination of knowledge to increase communities' understanding of how unsustainable practices heighten their vulnerabilities by contributing to climate change, its adverse effects on their livelihoods as well as ways to reduce deforestation and climate impacts.

General Awareness

The capacity building occurred through a funnel approach, where general awareness and REDD+ training focused on all the targeted 53 communities. The project used effective means of communication available in the communities to reach the masses. This included community information centres and beating of the gong to reach many in the communities including focus groups with relevant messages. The project also made use of radio broadcasts.

The DGM Radio Broadcast

The DGM project used local radio stations as a means to complement other dissemination efforts to reach everyone in project communities and beyond, including the marginalized, women, youth, and migrants.

Solidaridad procured airtime on local radio stations that operate within the catchment of the targeted local communities. Broadcasting was done during times convenient to the target audiences.

To reach more communities within the landscape and beyond, Solidaridad employed syndicated broadcasting. This involved broadcasting directly from one source but connecting other radio stations within the area at the same time to leverage their reach, scope and unique audiences.

Ten different local radio stations participated. They included Adars FM, Trickie FM, Dormaa FM, Shalom FM, Star FM, Sene FM, Winners FM, among others.

Topics often discussed included:

- How climate change manifests in local communities
- The impact of climate change on local communities
- The relationship between land use, climate change and local livelihood
- Frequently asked questions about the Ghana DGM project
- Climate-smart agriculture
- Good farming practices
- Cocoa agroforestry practices and challenges
- Tree tenure and benefit-sharing arrangements
- Enablers to safeguard climate finance investments
- Forestry policies (focus on off-reserve)
- Role of community members in fire prevention and control

The radio broadcast involved a panel discussion that typically featured subject matter experts from the Forest Services Division, Ministry of Food and Agriculture, National Fire Service and a five-episode drama series prepared in Twi, a vernacular, used by many in targeted communities. Solidaridad complemented the discussions and audience phone-in sessions with "Live Presenter Mentions" and customized radio jingles about climate change featuring Okyeame Kwame, a popular rap music artiste in Ghana. Solidaridad used this approach to make messages on climate change and sustainable land-use practices more appealing to the teeming youth who have an appetite for rap music.

This outreach benefitted 17,331 individuals from the project regions, who are now climate-conscious and are actively engaging in sustainable practices.

Basic Training

Community-level awareness and training

Based on strong interest and demonstrable commitment to apply the knowledge disseminated under the outreach session, a subset of participants of the general awareness elected themselves to receive a deeper understanding of the subject matter, dubbed basic training.

Solidaridad dispensed basic training to the local communities in three modules, emphasizing the relationship between unsustainable land-use practices and climate change. The training highlighted coping strategies such as livelihood diversification, soil and water conservation measures, climate-smart agriculture, agroforestry, tree planting, drought-resistant cropping and reduction in unsustainable practices.

Conducted in Twi, the common vernacular and the official language of the Ghana-DGM project, key concepts and terminologies related to climate change, REDD+ and sustainable development were translated into simple words and phrases that local communities could relate to.

Across all 53 project communities, Solidaridad organized the training in an interactive fashion that allowed for audience participation and encouraged participants to share anecdotal accounts of climate change manifestations in their communities and its impacts on livelihood.

Basic training was the first step undertaken to enable community members, eligible community-based organizations and individuals to have a deeper, more technical understanding of REDD+, and the linkage between livelihood and other activities.

Dedicated Training

Equipped with the knowledge of climate change and its linkages to land-use practices, 10 percent of beneficiaries who consistently partook in the basic training were self-selected for dedicated training.

Thus, additional hands-on training in climate-smart production practices related to dominant crops in the project landscapes was provided to 6,921 individuals. In the Bono area where yam cultivation is dominant, Solidaridad in collaboration with the Crop Research Institute equipped over 1,400 farmers with the requisite capacity to produce climate-smart yams. An eight-week-long training extensively engaged the farmers in:

- preparation of improved planting materials
- climate-smart land preparation methods
- sustainable intercropping methods
- seedbed designs like ridges
- staking options such as the use of trellis or minimum staking to reduce reliance on wood as stakes
- integrated nutrient and pest management

Similarly, project communities in the Western North region were exposed to climate-smart cocoa production practices such as intercropping, slash and mulch, lining and pegging, pruning and cocoa agroforestry. 627 farmers in this region benefited from the training.

KEY RESULTS

17,331 **rural folks sensitized** during general awareness

627 **project beneficiaries trained** in the Western North region in climate-smart cocoa production

317 men

310 women

68% Natives

32% Migrants

6,294 **dedicated members trained** in the Bono and Bono East regions

2,938 men

3,356 women

57% Natives

43% Migrants

TRAINING

STORIES FROM BENEFICIARIES

Accounts of Individuals on how the Basic and Dedicated Trainings have Benefited them

INDIVIDUAL BENEFICIARIES OF BASIC AND DEDICATED TRAINING IN THE BONO AND BONO EAST REGIONS

"...this planting season, I did not burn the weeds, neither did I kill a single tree"

NAME: JOHN YANYAME
COMMUNITY: ADJALAJA-BEPOSO

In Beposo, a small migrant community in the Bono East region, Solidaridad mobilized over 400 individuals to participate in basic training programmes under the DGM project.

John Yanyame decided to join after an initial insight he received on climate change from the DGM radio broadcast.

"It was the jingle that caught my attention on Star FM. In the song, Okyeame Kwame outlined burning and indiscriminate cutting of trees as some of the practices that have led to the reduced rainfall and excessive heat we have been experiencing," he says. "I also enjoyed the phone-in segment because I could call and ask questions I had in mind."

After gaining more insight and knowledge on sustainable land-use practices from the training, 40-year-old John has decided not to remove the remaining trees on his 6-acre yam farm. He says the practice of clearing the land with fire prior to planting was passed on to him by his father. He has been practising this with his sons until he had the wakeup call from the DGM project.

"For 12 years I was burning everything on my yam field before planting. I did not know these actions hurt the environment and contribute to climate change," he indicated. "But this planting season, I did not burn the weeds, neither did I kill a single tree," he says.

Mr Yayame who has shared the new knowledge and experiences on climate-smart farming practices with his sons and relatives, says"the trend of bush burning and tree cutting can end if the youth are made aware of the consequences of unsustainable practices today."

> "After the training, I planted 40 cashew and mahogany trees and incorporated beans and other legumes in my farm to increase soil fertility."

NAME: FRANK BILASIM
COMMUNITY: ADJALAJA-BEPOSO

Frank was groomed at a young age to take over the family's farm. In families where farming is the predominant occupation, intergenerational transfer of traditional farming practices is considered an invaluable means to sustain the family's food basket.

"I always followed my father to the farm on weekends. I learnt how the land was prepared for planting yam and the method was to remove all the trees by burning or cutting before preparing the seedbeds," says Frank.

In the wake of the worsening climate situation, the need to reform poor traditional farming practices has become very critical to ensure sustainability. Solidaridad, through the Ghana DGM project, drummed home this message by engaging communities on the causes of the noticeable changes in temperature and rainfall as well as ways to cope with the erratic weather conditions.

"Before the DGM basic training, I had no trees on my farm because I was not aware of their benefits to the climate and the survival of my crops. After the training, I planted 40 cashew and mahogany trees and incorporated beans and other legumes in my farm to increase soil fertility.

I am convinced these will help my crops and provide financial returns in the long run," says Frank Bilasim. As a 30-year-old father, Frank will pass down the newly acquired knowledge to his son to build a new crop of climate-responsive farmers in his lineage.

Under the DGM project, Solidaridad has equipped hundreds of farmers in Beposo, where Frank lives, with improved climate-smart yam production techniques.

"I get excited anytime I see the flourishing trees on my farm. I wish I had planted them earlier"

NAME: MARY YEBOAH
COMMUNITY: ASUNSO NO.1

Forests are degrading, biodiversity is being lost, animal and plant lives are threatened, glaciers are melting at an alarming rate, sea levels are rising and the capacity of our planet to support life is hugely compromised. These were some of the global manifestations of climate change that Solidaridad presented to local communities during their basic training under DGM implementation.

Although rural folks are the hardest hit by changing climatic conditions due to their climate-sensitive livelihoods, they are unaware of the causes and lack the capacity to implement adaptive and mitigative measures. Solidaridad used videos and other illustrative materials to drum home the devastating consequences of human activities on the environment.

Mary Yeboah, a 41-year-old farmer and trader living in Asunso No. 1 community, was one of the beneficiaries of the training.

"We have been experiencing shorter rainfall seasons and longer dry periods. But I thought that was the course of nature. I did not know that cutting down trees in the forests and on our farms could affect the rains," she says.

Being a cocoa farmer, she used to kill trees on her farm because she found them a nuisance. Today, Mary has planted 35 frake trees and an acre of cashew trees through the support of Solidaridad under the DGM project.

"I get excited anytime I see the flourishing trees on my farm. I wish I had planted them earlier," she says.

Iterating the value of the knowledge gained, she says it is an eye-opener for local communities.

"The DGM project should expand its operations to every rural community in Ghana. I believe that when the awareness of climate change is widespread, our collective actions can fight it."

As a trader, Mary Yeboah occasionally shares her newly acquired knowledge on climate change with her customers within neighbouring communities as her contribution to climate awareness.

> "In less than a year of practising slash and mulch, I have seen positive changes in my farm."

NAME: KINGSLEY AFRIFA
COMMUNITY: ASUNSO NO.1

"It was the DGM slogan - knowledge improves livelihood - that first caught my attention. I was curious to obtain the knowledge that would help better my life as a farmer, so I participated in the training" says Kingsley Afrifa. "That decision has transformed my farming practices positively."

The 41-year-old farmer lives in Asunso No. 1, a DGM project community in the Dormaa East District of the Bono region. He says the messages about climate issues and their link to land-use practices and livelihood activities were apt and relatable. Through the training, he received in-depth knowledge about the causes of the erratic climatic conditions and ways to mitigate it.

"I used to remove trees on my farm because I thought they would breed pests and diseases. For 10 years, I had constantly used fire to clear the vegetative cover of my farm during land preparation. I did not know these practices were harmful," says Kingsley.

"But after the basic training, I have a better appreciation of the benefits of trees. Consequently, I have planted 30 frake trees and 40 cashew trees on my farm."

Kingsley says since project operations began in Asunso No.1, the incidence of bush fires had reduced. He attributes this to the willingness of many farmers to practice slash and mulch instead of burning after experiencing the benefits of the climate-smart practice.

"In less than a year of practising slash and mulch, I have seen positive changes in my farm. The soil always has water even during the dry season, and my crops look evergreen."

> "Even though I planned to kill trees on my farm because I did not recognize their benefits, I have desisted from doing so. Today, I have incorporated more cashew and mahogany trees on my farm."

NAME: CHARLES DARKO
COMMUNITY: BOFFOURKROM

Charles Kwasi Darko resides in Boffourkrom but traces his matrilineal roots to Donfete, a non-DGM project community. He is a farmer with over two decades of experience in cultivating yam and maize.

Now 60 years old, Charles recounts how rainfall was predictable as a young farmer and how the recent variability in rainfall patterns has drastically affected his productivity.

"Years back, we enjoyed two farming seasons because the rains were timely and sufficient. But currently, you are not even assured of rain during the major rainfall season," he says.

"Because of this, our yields have suffered." After weeks of receiving education on REDD+, climate change, and climate-smart farming practices from Solidaridad, Charles has completely changed his farming practices. Charles explains that through the DGM project, farmers like himself are now aware of land-use practices that degrade their landscapes and fuel climate change.

"I used to clear my land of all the vegetation and burn them before planting. This year, I did not cut down any tree but applied 'proka' (slash and mulch) as taught by the DGM team. The 'proka' has really controlled the growth of weeds on my yam field. DGM has indeed redefined farming for us," he says.

Not only have farmers adopted climate-smart agricultural practices, but many, like Charles, have developed the willingness to maintain and plant trees on their farms. Today, Charles has planted two acres of cashew and mahogany trees.

Neighboring communities that did not benefit directly from the DGM project, have also, on their own volition planted trees on their farms following the knowledge gained from the DGM radio broadcast on climate-smart activities. Martin Yeboah, who lives in Donfete, a non-DGM project beneficiary community, heard of the linkage between climate change and unsustainable land-use practices from the radio broadcast, which was recommended to him by Charles Darko, his friend.

"Since then, I have desisted from burning my land after slashing. Even though I planned to kill trees on my farm because I did not recognize their benefits, I have desisted from doing so. Today, I have incorporated more cashew and mahogany trees on my farm," says Martin.

Additionally, the Chief of Donfete has dedicated a three-kilometre stretch of the community river for tree planting after Charles engaged them on climate-smart activities. Solidaridad is currently facilitating the community's access to tree seedlings from the Forestry Commission in Sunyani to undertake this initiative.

> “ The DGM training has helped me to appreciate the importance of trees to human life and the environment. Before the basic training, I thought trees were only meant for shade, firewood and furniture.”

NAME: NANA AFIA GYAMEA
COMMUNITY: NANTE

Farmers in Nante mainly produce yam and cashew. Aside from their economic value, cashew trees are good storages for carbon dioxide (an atmospheric gas that makes the earth hotter when in excess). A recent scientific study in Cameron on the carbon storage capacity of cashew plantations revealed their potential to store 35 tonnes to 40 tonnes of carbon dioxide per hectare (Noumi et al., 2017).

Solidaridad, through the DGM project, has supplied over 162,000 cashew seedlings to communities within the Bono landscape after sensitizing community people on REDD+ practices and climate change. The seedlings have been planted on individual farms as well as communal lands.

In Nante, Afia Gyamea has voluntarily planted 80 cashew trees on her farm after receiving seedlings from the DGM project. Although a yam farmer, Madam Gyamea is now cultivating cashew to diversify her livelihood sources to build her resilience against climate change.

“The cashew trees I have planted will give me more money while the trees store the carbon in the air. The DGM training has helped me to appreciate the importance of trees to human life and the environment. Before the basic training, I thought trees were only meant for shade, firewood and furniture,” says Afia Gyamea.“

> "Planting in ridges has also allowed me to plant more maize on the same piece of land. I no longer cut trees to serve as stakes"

NAME: YAA BAFFOWAA
COMMUNITY: NANTE

Most yam farmers in local communities believe that the ultimate solution for disease infestation is to cultivate new lands, which are usually forest lands. Solidaridad, through its collaboration with the Crop Research Institute of the Centre for Scientific and Industrial Research, has debunked the age-long misconception in 21 local communities by teaching farmers how to intensify through improved yam production techniques.

Farmers from DGM communities are getting results after applying the knowledge and are confident of improving their yields with the climate-smart method.

"This year, I washed the yam setts - the seed yam - in ash water before planting and I was amazed at the outcome. I have not lost any yam to diseases," says Madam Baffowaa.

"Planting in ridges has also allowed me to plant more maize on the same piece of land. I no longer cut trees to serve as stakes – I only need a few bamboo sticks and ropes for support."

With support from the DGM project, Yaa Baffowaa has planted 80 cashew trees and is currently transplanting 40 mahogany seedlings she accessed from the Forest Investment Programme implemented by the Forestry Commission.

""This year, I did not burn my land before planting. I did slash and mulch which I learnt from the training."

NAME: AGNES SARKODIE
COMMUNITY: NANTE

"I have been farming for 25 years now. During this period, I was burning the vegetation including trees on my yam field. I was not aware that I was contributing to the global warming we are experiencing now until I joined the DGM training," says Agnes Sarkodie, a 60-year-old farmer in Nante.

Global warming results from the build-up of greenhouse gases in the air, particularly carbon dioxide. Burning of forests, grasslands and agricultural lands contribute to one-third of the carbon dioxide humans produce. Any effort in reducing the sources of human-induced carbon dioxide production will, therefore, go a long way in reducing the heat we have been experiencing.

Solidaridad, through the DGM project, has made steady progress in supporting thousands of community people across the Western North, Bono and Bono East regions of Ghana to discontinue practices that release carbon emissions.

"This year, I did not burn my land before planting. I did slash and mulch which I learnt from the training. Even on very hot days, the soil is moist when I dig," says Agnes Sarkodie. "I have also planted 80 cashew trees," she noted.

While uprooting the weeds around one of her young cashew trees, Madam Sarkodie cheerfully says, with the support of the project, she can compensate for the carbon emissions she has contributed to during the days she lived in ignorance. She hopes to leave behind a cleaner and safer environment for the next generation.

"Together, we have planted five acres of frake trees, three acres of mahogany trees, and three acres of cashew trees with support from the project. Before the intervention, we did not keep any trees on our yam field because we did not understand their value. But after the training, our mindset and that of the community changed."

NAME: ATTA KWADWO JNR. AND SNR
COMMUNITY: DAWADAWA NO.2

From birth, the twins have shared almost everything from food to clothing to places of residence. At 43 years, they still share a special bond in their work as farmers and chief linguists in their community. Joined to the same placenta as fetuses, the twins who live in the Dawadawa No. 2 community are also united in their passion to tackle climate change after receiving an in-depth understanding of the phenomenon through the DGM project.

"Together, we have planted five acres of frake trees, three acres of mahogany trees, and three acres of cashew trees with support from the project. Before the intervention, we did not keep any trees on our yam field because we did not understand their value. But after the training, our mindset and that of the community changed. We now understand that if we do not replace the trees we have destroyed, our existence will be threatened," says Atta Kwadwo Senior.

In the Dawadawa No. 2 community, the project has supported the establishment of a 30-acre cashew plantation and protected them with drought-resistant acacia trees as fire belts. As part of the community leaders who offered the land for the plantation, the twins expect the cashew to provide economic returns and also restore the lost vegetative cover in the area.

To enable the community people to further their learning and share experiences on sustainable land-use practices, Solidaridad facilitated the participation of 16 farmers in the Global Landscape Forum held in Accra in 2019. Atta Kwadwo Junior was part of the hundreds of stakeholders that discussed solutions and the need to restore Africa's degraded landscapes at the forum.

"The irregular rainfall and strong heat from the sun are destroying our crops. We were happy to share our plight as farmers and how the project is supporting us to protect our livelihoods. We are hopeful that the weather conditions will get better since we now act responsibly toward the environment," says Atta Kwadwo Junior.

> "Currently, I have planted 65 cashew and mahogany trees I received as support from the DGM project, and I am planting more from my own resources."

NAME: YEBOAH ASIAMAH
COMMUNITY: ABEASE

Yeboah Asiamah, a 59-year-old farmer, was part of the hundreds of community members in Abease who partook of training sessions after listening to the DGM radio broadcast on Adars FM.

"The interactive discussions about the causes of irregular rainfall patterns and increasing temperatures sparked my interest," he says. "I did not know that cutting trees in my village could contribute to a global menace."

Recounting three decades of experience in farming, Mr Asiamah says the practice for him had been to clear all the vegetation on the land before planting.

"Until the project began here, I used to burn all the trees and weeds on my farmland after killing them with weedicides," he says. "But now I leave the weeds to decompose and nourish the soil." This new practice Yeboah has adopted, he says, also makes his land cool even on very hot days.

He has also planted cashew and indigenous trees on his eight-and-a-half-acre farmland to provide shade for his crops.

"Currently, I have planted 65 cashew and mahogany trees I received as support from the DGM project, and I am planting more from my own resources," he says. "I want to leave them as a legacy for my eight children. I have told them the importance of maintaining the trees and they have promised not to cut them when I am not around.

> "For the first time, I planted yams in ridges and intercropped them with maize and beans just as I learned from the training."

NAME: MAVIS AFRAH
COMMUNITY: ABEASE

Four years ago, 27-year-old Mavis took over her mother's yam farm. Having followed her mother to the farm while growing up, she became all too familiar with the practice of killing all the trees on the farm before planting.

"You either cut the trees down or set them on fire before yam planting," she says.

But after joining hundreds of community people in her local community, Abease, for training on good farming practices, Mavis began to make changes in how she farms. She now incorporates trees in her yam field and has planted 79 trees.

Mavis also benefited from practical training and demonstrations on improved climate-smart yam production techniques jointly organized by the Crop and Research Institute and Solidaridad. The training exposed participants to climate-smart land preparation methods, alternative seedbed designs, staking options and sustainable intercropping methods, among others.

"For the first time, I planted yams in ridges and intercropped them with maize and beans just as I learned from the training. I have realized that the ridges do not require a lot of land area and that has reduced my labour cost," she says. "Leaving the beans leaves behind after harvesting helps to nourish the soil. I am happy to be practising a low-cost farming method that protects the environment."

Beaming with smiles over the prospects of her farm, Mavis says she has shared the new knowledge and good farming practices with her uncles who have also adopted the climate-smart farming method.

> "I used to think we were experiencing unfavourable weather conditions because of an ancestral curse. But through the project, I have learned that the low rainfall we have been experiencing is as a result of climate change, partly caused by our unsustainable practices."

NAME: PHILOMENA AMPOMA
COMMUNITY: ABEASE

Women tend to bear the brunt of climate-induced stressors such as diseases, water scarcity and food shortages. They are usually at the forefront of seeking relief for their children and the entire household.
By design, the Ghana DGM project integrates gender considerations, including perceptions and actions into the preparation, design, implementation, as well as monitoring and evaluation of activities.

Throughout the project implementation, Solidaridad has been creating unique spaces for both women and men, including the marginalized, to share their views, either separately or jointly, whichever yields the best dialogue outcomes. The outcome has been the active involvement of women in climate-resilient initiatives that reduce their vulnerabilities.

Philomena Ampoma, a 45-year-old single mother of six, is one of 9,000 women whom Solidaridad has supported to undertake sustainable practices that protect the environment and improve yields under the DGM project.

"During DGM training sessions, we [women] were separated from the men. This allowed us to freely express our concerns and ideas. Because of this, I did not want to miss any of the training sessions." says Philomena.

Having farmed for almost half of her lifetime, she experienced low productivity in her yam and maize farm in the past decade due to prolonged dry periods.

"I used to think we were experiencing unfavourable weather conditions because of an ancestral curse. But through the project, I have learned that the low rainfall we have been experiencing is as a result of climate change, partly caused by our unsustainable practices. I had been cutting down trees and burning my farm. This left my land bare and parched," she says.

Following Solidaridad's training, Philomena is now practicing climate-smart agriculture.

"Today, I do not burn the weeds on my farm during land preparation. I practice mulching by simply leaving the weeds to rot after weeding. This improves soil fertility. The foliage of the maize I plant looks very green and healthy and the land feels cool all the time even when the weather is hot. I am already seeing signs of a bumper harvest that I have not experienced for years," she says.

Philomena has also planted 50 cashew trees on her farm with seedlings from the project. She hopes to generate more income from her farm during the next harvesting season.

"As a single mother, it is very tough fending for six children on my own. The cashew will provide me and my children the extra income I badly need," she says.

> "After the training, I stopped burning my land after weeding. I now plant yam in ridges and I no longer require a lot of wood as stakes due to improved seedbed design."

NAME: JOHN AMEYAW
COMMUNITY: ASEKYE KROKESE

John Ameyaw is in his 60s and lives in Asekye Krokese community, a DGM beneficiary community in Nkoranza North district of the Bono East region. The community is predominantly made up of yam farmers.

John, like most of his community folks, now produces yam using the new methods he learned from Solidaridad during a training session on climate-smart yam production.

For close to 40 years, John produced the tuber by burning the vegetation that covers his field and cutting down trees to serve as stakes for the yam. However, upon receiving training on improved yam farming, he now practices slash and mulch, which improves soil fertility.

"After the training, I stopped burning my land after weeding. I now plant yam in ridges and I no longer require a lot of wood as stakes due to improved seedbed design. Instead, I make ropes out of dried plantain leaves to support the yam," he says.

The Ghana DGM project is helping farmers in the Bono and Bono East regions to address some of the challenges they have with sustainable yam production. John says, "with the climate-smart methods he and other farmers now practice, they do not need large tracts of land to increase yam productivity in the future."

> "I never missed a training session because the knowledge provided was priceless. We were trained to understand the manifestations of climate change and how it affects our farming activities,"

NAME: MANU ARTHUR
COMMUNITY: ASEKYE KROKESE

Arthur Manu vividly recalls when he first heard about the DGM project and discussions about climate change and deforestation on Adars FM, a local radio station in his community. He disclosed that the insights gained from the radio broadcast piqued his interest to join the training programme in his community.

"I never missed a training session because the knowledge provided was priceless. We were trained to understand the manifestations of climate change and how it affects our farming activities," says Manu, a farmer at Aseye Krobese.

He recounted that with the old method of planting yam, he had to cut down trees to use as stakes to support the individual seedbeds; and that meant 20 mounds required 20 stakes. However, following the DGM training on improved yam production, he says he now plants his yam in ridges which has reduced his reliance on wood as stakes. I now use ropes to support the yam vines instead.

Upon receiving training on climate-smart yam production, Manu applied the knowledge that planting season.

"I have seen visible improvements in my farm after I intercropped the yam field with beans. Instead of burning, I now keep the vegetation that covers the soil. This has improved the soil fertility. And with the ridge method, I am able to grow some vegetables alongside my yam," says Manu.

The DGM project is also supporting some communities with the construction of boreholes as an adaptive measure to climate stress. Asekye Krokese is one of the thirty-eight communities that is benefiting from the construction of solar-powered boreholes as an adaptive measure to reduce their vulnerabilities to climate stress.

Commenting on the ongoing construction of the borehole, Arthur Manu indicates that it will serve as a reliable source of irrigation water for him and other farmers during the dry season.

While fixated on his neighbour who had just returned from a tiresome trip in search of water, Manu said the borehole would relieve women and children from the stress of trekking long distances for water.

> "I was really happy to learn of climate change and how we could apply climate-smart techniques to enhance our production."

NAME: BENJAMIN AMPONSAH
COMMUNITY: KRABONSO

After a treacherous journey to Libya for greener pastures, Benjamin returned home to farming to make ends meet.

"I left this village because farming was not profitable. I could not produce enough yields due to the irregular rainfall pattern and having to always cultivate on new land. Upon my return, I was really happy to learn of climate change and how we could apply climate-smart techniques to enhance our production," says Benjamin, a farmer in Krabonso, a DGM beneficiary community in the Bono East region.

Today, thanks to the DGM project, Benjamin is producing more yam on the same piece of land after applying the climate-smart techniques he learned from the training on improved yam production. He explains that the training has debunked an age-long notion that one needs a large size of land in order to increase productivity.

"I did the ridges and planted the yam this season just as was demonstrated during the training. Indeed, I used a very small area of land to plant the same quantity of seed yam I usually plant. And now I am getting more yam from the same land."

Amponsah stated that with the improved technique, he no longer cuts saplings to support the yam vines. Instead, the design of the ridges allows him to wind the yam climbers around ropes. Additionally, he has planted 20 frake trees on his yam field with seedlings he received from the project.

Benjamin, like the hundreds of farmers across the 20 communities in the Bono East region who benefitted from an eight-week long training, is not only producing yam the climate-smart way but has also increased his productivity.

“After practising slash-and-mulch for a while, I noticed that the maize grew faster than when I used to burn the land.”

NAME: SULEY SALIFU
COMMUNITY: ZABRAMA

Looking back, Suley Salifu describes the DGM training as eye-opening. He did not know the benefits of planting trees to the climatic conditions and had hitherto cut down most of the trees on his six-acre yam farm. Following the training, Suley has planted two acres of cashew trees and an acre of mahogany trees.

Local communities are more vulnerable to climate change because their livelihoods are closely tied to the climate system. As a result, farmers are more inclined to adopt climate-smart interventions that increase their productivity.

“After practising slash-and-mulch for a while, I noticed that the maize grew faster than when I used to burn the land. Also, the land is moist and cool even during the dry season, so I am able to dig the soil with ease at all times,” says Suley.

He noted that after adopting the minimum trellis method of yam production, his reliance on wood for stakes has reduced from about 20 to four. He also revealed that with the ridge method, he uses half of the land area to produce the same quantity of yam he had produced in the previous years.

INDIVIDUAL BENEFICIARIES OF BASIC AND DEDICATED TRAINING IN THE WESTERN NORTH REGION

> "I can expect a healthy and productive cocoa farm through the constant practice of these improved farming methods I have learned."

NAME: MARTHA ATIIGAH
COMMUNITY: CAMP 15

"A week before the training, I got rid of four trees on my farm because I did not find them useful. But after understanding how trees provide shade and protect the cocoa from the hot sun, I kept the remaining trees and even planted some more," says Martha Atiigah, a farmer at Camp 15.

With support from the DGM project, 21 cocoa-growing communities in the Western North region are now better positioned to protect their farms and livelihoods against the adverse effects of climate change. Solidaridad, through the project's basic training activities, has provided hands-on field demonstrations to over 4,800 cocoa farmers on climate-smart cocoa production.

Martha Atiigah, like other beneficiary farmers, is hopeful about her yields after the training on intercropping (using recommended spacing), pruning and mulching, and skills she hitherto did not have. She has also incorporated 45 trees on her newly established cocoa farm with seedlings she received under the project.

"I can expect a healthy and productive cocoa farm through the constant practice of these improved farming methods I have learned," she says.

> "I have planted 70 tree seedlings on my farm. I also own a small nursery I established using seeds I gather from the wild."

NAME: NANA KWADWO LARTEY
COMMUNITY: ASEMPANEYE

In Asempaneye, Nana Kwadwo Lartey is providing free tree seedlings to farmers after gaining insight into climate change. Nana Kwadwo is a veteran cocoa farmer and a sub-chief in Asempaneye. He says the community had no knowledge about the causes of irregular rainfall patterns until the DGM project began creating awareness.

"Before DGM, we attributed the unpredictable weather conditions to mystical sources, but after the discussions, films, and illustrations that showed how indiscriminate burning and deforestation has contributed to climate change, our mindset has changed," he added.

Most cocoa farmers in Ghana destroy naturally occurring trees on their farms for fear of losing them to timber merchants, who damage their crops in the process. This has led to a shift from shade-grown cocoa to full-sun cocoa, which affects the long-term productivity of the crop and reduces the fertility of the soil.

To address this concern, the DGM project collaborated with the Forestry Investment Programme to sensitize hundreds of community people on provisions in the Ghana Forest and Wildlife Policy 2012 that allowed the registration of trees planted by individuals.

Today, Nana Lartey and the community people in Asempanye are willingly planting different shade trees like acacia, frake and mahogany on their cocoa farms with the support of the project.

"I have planted 70 tree seedlings on my farm. I also own a small nursery I established using seeds I gather from the wild. I give some out to individuals who show interest in tree planting."

As a traditional authority in his community, Nana Kwadwo Lartey says Asempaneye will be relieved of its water-related issues thanks to the solar-powered borehole the DGM project is constructing. He also noted that the borehole will serve as a reliable water source to hydrate the seedlings planted under the project.

> "I have not used weedicides after practising 'proka' (slash-and-mulch) this season, because the practice helps to control weeds. "

NAME: SUSSANA ADJO
COMMUNITY: BENCHIMA

Before the training on climate change and sustainable land-use practices, cocoa farmers in DGM project communities destroyed trees on their farms and engaged in slash-and-burn agriculture, which exposed their crops to devastating climatic conditions. The practices compromised the function of the landscape and affected the productive capacity of their lands.

"Ten years ago, I could harvest 30 bags from my cocoa farm but now I cannot produce half of that quantity. The cocoa I established five years ago have also started dying; the leaves have dried out," says Sussana Adjo.

Sussana is a cocoa farmer in Benchima, a DGM beneficiary community in the Western North region. She explains that before she gained knowledge of climate change, she considered the rise in temperatures and rainfall variabilities as an act of God.

"I now know that it is human activities such as burning and wanton tree cutting that have brought about the weather changes. I have also learned that planting trees can reduce the excessive heat we currently experience. As a result, I have planted 30 frake trees on my new cocoa farm with seedlings I got from the project," she says.

The interventions Solidaridad provide through the DGM project are not only reforming unsustainable land-use practices but are producing additional livelihood benefits.

"I have not used weedicides after practising 'proka' (slash-and-mulch) this season, because the practice helps to control weeds. Also, after following the recommended spacing to grow plantain this season, I have harvested bigger bunches," says Sussana.

> “Most of my farmer friends are also practising the ‘proka’ (slash-and-mulch) after they witnessed the changes on my farm.”

NAME: KOFI MANU
COMMUNITY: KUNKUMSO

“When my cocoa farm became diseased, I destroyed all the trees because I thought they were the cause. But after the knowledge gained from the DGM training on climate-smart cocoa production, I have planted 60 mahogany and frake trees on my new cocoa farm,” says Kofi Manu, a farmer in Kunkumso.

“I now know that having the right type of shade trees and proper pruning ensure the health of the cocoa,” he added.

Smallholder farmers like Manu are inclined to accept climate-response interventions that improve their yield and secure their agricultural livelihoods. Thus, Solidaridad adopts an adaptation-led approach with mitigation co-benefits in implementing the DGM project.

To increase the willingness of farmers to engage in land-use practices that reduce emissions from agriculture-based activities, they were extensively engaged in how their livelihoods are tied to REDD+ practices.

Farmers in project communities have widely adopted agroforestry and climate-smart farming practices such as shade cocoa and slash-and-mulch after Solidaridad raised their awareness on adaptation benefits.

For instance, beneficiary farmers no longer burn the vegetative cover of their farms after weeding, since becoming aware of the soil fertility and moisture conservation benefits of the practice.

Like the over 600 farmers in the Western North region who benefitted from DGM’s training on good farming practices and climate change, Kofi Manu is willingly implementing climate-smart agricultural practices.

“I no longer clear my land with fire. I allow the weeds to mulch, which nourishes and cools my land, even on hot days like this. Most of my farmer friends are also practising the ‘proka’ (slash-and-mulch) after they witnessed the changes on my farm,” says Kofi.

COMPONENT TWO

Provision of Grants to Individual, Communities and Community-Based Organizations

DEMAND-DRIVEN GRANTS

The hands-on training sought to prepare beneficiaries to apply for grants. The grant phase allowed communities to put into practice what they had learned and to better understand the linkages between the knowledge they had gained, and the investments and practices they engaged in. Grants were made available to individuals, communities, and community-based organizations to undertake small-scale climate-smart initiatives.

Prior to the implementation of the initiatives, Solidaridad conducted environmental and social screening to safeguard initiatives against potential environmental and social risks. Issues on land ownership, the potential environmental impact of subprojects and other sociocultural factors that could hinder project implementation were also considered. This informed the design of an Environmental and Social Management Plan, which is an integral part of the DGM project implementation and monitoring strategies. The Plan also outlines several preventive and mitigation actions for the initiatives.

Grantees

The individual grant was only accessible to local community members who consistently took part in the training and passed an oral test. A total of 156 individuals and their local communities in Western North, Bono and Bono East regions have undertaken climate change and REDD+ related initiatives with demand-driven grants from the Ghana Dedicated Grant Mechanism project.

Nine community-based organizations in the regions also received support from Solidaridad through the DGM project, to implement climate-smart and sustainable activities using project grants. The organizations were also selected based on their track record of credibility and footprints in the communities where they are located. This followed a risk assessment process to appraise the organizations' governance structures, membership strengths and the efficiency of their operations. The assessment was a precondition for receiving demand-driven grants under the DGM project to implement climate response intervention.

Grant Activities

Initiatives that individuals and local communities have implemented include agroforestry, communal reforestation, tree planting along water bodies, cashew plantations and the construction of solar-powered mechanized boreholes and streetlights.

WOMEN AND MIGRANTS AS KEY AGENTS FOR CLIMATE ACTION

Women

Rural women are increasingly becoming vulnerable to the impacts of climate change in the face of extreme weather conditions like heat waves, droughts and floods. In most parts of Africa, women are often responsible for gathering and producing food, collecting water and sourcing fuel for cooking. With climate change, these tasks are becoming increasingly difficult. Despite their greater need for adaptive and mitigative interventions, women are often plagued with issues of marginalization in crafting effective climate change solutions.

Under the DGM project, Solidaridad consciously ensured the active involvement of women in project interventions, by exclusively engaging women groups in discussions during the training sessions. This encouraged women to freely exchange ideas and generate effective responses on how they can adapt to climate stress.

Out of 17,331 community people who increased their knowledge of climate change and sustainable forest management through the implementation of the DGM project, over 50 percent were women. Similarly, 66 women received financial support to implement small-scale climate-smart initiatives in their communities to build their resilience against climate change. The initiatives include, cocoa and cashew agroforestry, the establishment of tree plantation and the planting of trees around water bodies.

Migrants

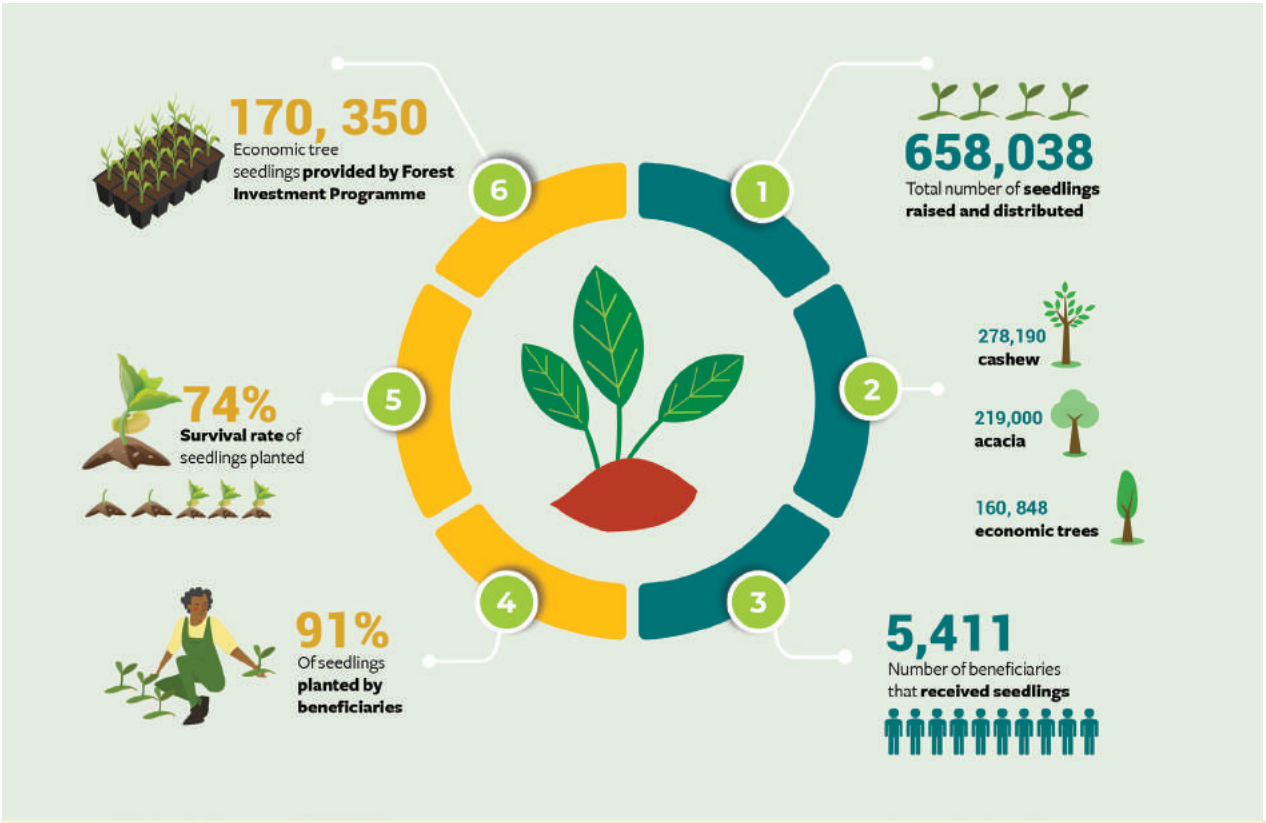
To enhance climate resilience and empower all beneficiary community members to serve as effective change agents, Solidaridad promoted the active participation of migrants.

Despite the prioritization of boreholes as a climate response intervention by migrant-dominated communities, individual migrant farmers who have rights to land willingly planted trees. Of the 58 migrants who received funding to implement climate-smart initiatives, 95 percent are engaging in agroforestry and tree planting activities.

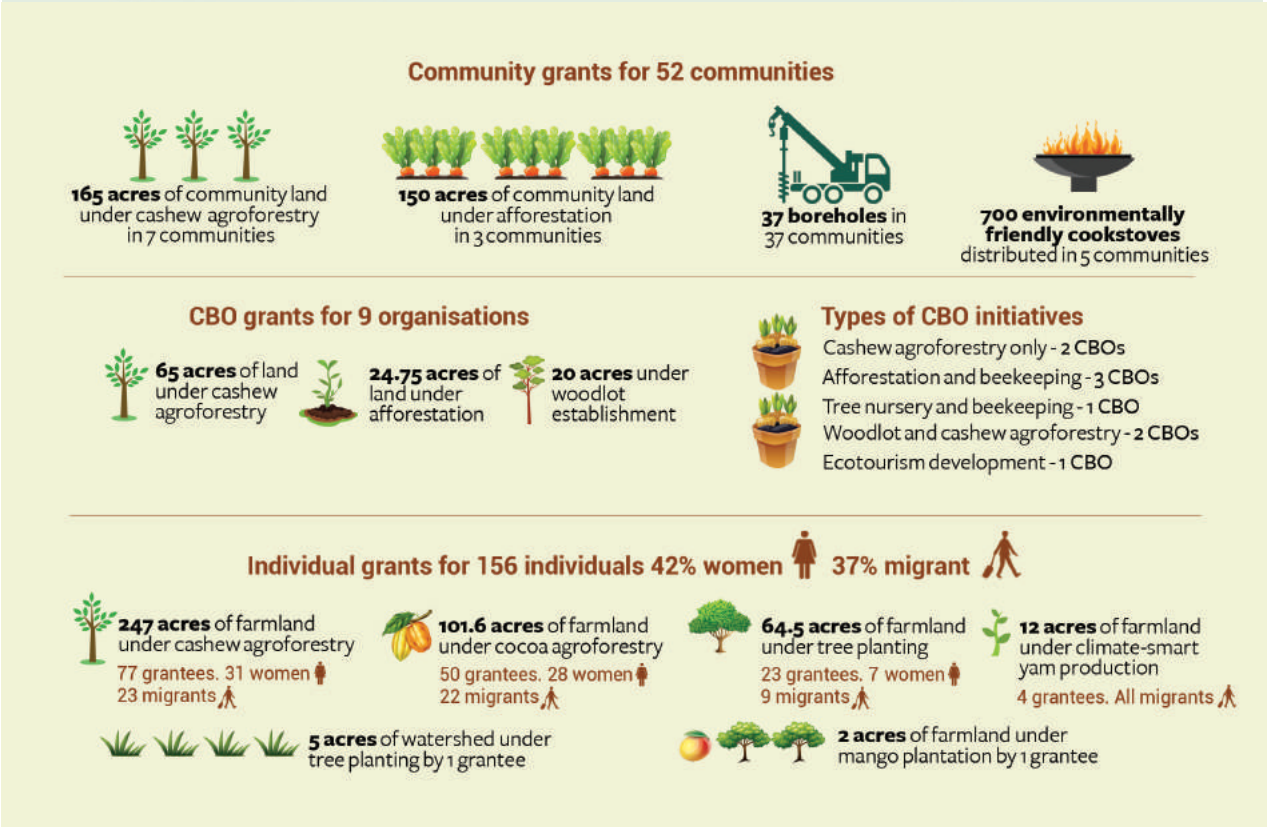
This outcome reflects the high-level of interest of vulnerable groups to actively invest in land-based climate response interventions when given the right information and support. Community-based adaptation approaches are, therefore, critical to ensure effective implementation of adaptive measures that yield positive results.

KEY RESULTS

SEEDLING SUPPLY



GRANT ACTIVITIES



STORIES FROM GRANTEES

Accounts of Individual Grantees

INDIVIDUAL GRANTEES IN THE WESTERN NORTH REGION

NAME: SARAH EWUDZI
COMMUNITY: ASANTEKROM

> " I have learnt that we are experiencing more heat and less rain because we have cut down the trees which would have taken in the smoke carbon from the air. Now, I have 30 mahogany and frake trees on my cocoa farm."

"Two years ago, I destroyed all the trees on my farm. But after I learned from the DGM training that shade cocoa has longer productive years than full sun cocoa, I have been planting more trees. Now, I have 30 mahogany and frake trees on my cocoa farm," says Sarah Ewudzi, a migrant farmer in Asantekrom.

Sarah joined weeks of basic and dedicated training on climate change and climate-smart cocoa production organized under the DGM project. Although she has no formal education, she now possesses a vast amount of knowledge on climate change issues, which she ascribes to the training she attended.

"Burning produces a lot of carbon which makes the weather very hot. Trees take in some of the carbon produced from burning. I have learnt that we are experiencing more heat and less rain because we have cut down the trees which would have taken in the smoke carbon from the air."

Sarah indicates that but for the intervention of the project, which has raised the awareness of farmers on climate change and ways to adapt, most farmers like herself would have remained unaware of how they could protect their livelihoods.

Having benefited from implementing the climate-smart farming practices, Sarah now shares her experiences with other farmers in her church, informing them that "slash-and-mulch agriculture keeps moisture in the soil and improves the fertility of the land."

To ensure the sustainability of her new cocoa farm for her seven children, 51-year-old Sarah Ewudzi is currently receiving support from the project to incorporate trees on her two-and-a-half-acre farm. She is confident that the trees will improve the productivity of her farm and protect the environment.

Sarah is also raising tree seedlings for the Forestry Division in her district under the Forest Investment Programme, an opportunity she became aware of after her involvement in DGM activities. She is confident that the boreholes being constructed in Asantekrom will provide a reliable water supply for the nursery.

> "I changed to a more sustainable practice, slash-and-mulch. Since then, I have noticed that the land is no longer dry and hard."

NAME: PATRICIA TANDOH
COMMUNITY: BODI

When Patricia Tandoh joined her husband in Bodi 25 years ago, she cultivated a backyard vegetable farm until she could afford to start a cocoa farm. She recounts how predictable rainfall was during that period. This contributed to bountiful yield. However, erratic rainfall and lengthy periods of dry spells in recent times have taken a toll on the productivity of her cocoa farm and her income.

When she heard about climate change and ways to reduce its impacts from her community Information Centre, the messages resonated well with her. With an increased appetite for more, she decided to make herself available for additional training that Solidaridad offered to her local community through the DGM project.

"Through the training, I understood that slash-and-burn, a popular land preparation method, reduces soil fertility and contributes to climate change. Therefore, I changed to a more sustainable practice, slash-and-mulch. Since then, I have noticed that the land is no longer dry and hard. Leaving the slashed vegetation as a cover has also helped control erosion on my farm", she says.

In Bodi, Solidaridad, through the Ghana DGM project, has sensitized hundreds of people on climate change and REDD+ practices and supplied to farmers thousands of trees with shade and economic value.

After voluntarily planting 50 mahogany and frake trees on her young cocoa farm, Patricia is receiving additional support from the project to engage in climate-smart cocoa production.

“I am confident that the shade trees will protect the new cocoa I am planting from the damaging heat of the sun and improve productivity.”

NAME: REBECCA MOCHIA
COMMUNITY: DAMOAKROM

Through the DGM project, a new crop of young farmers across 53 beneficiary communities have been empowered to become climate-aware, and 25-year-old cocoa farmer, Rebecca Mochia, is one of them.

Three years into inheriting her mother’s cocoa farm, Rebecca was faced with challenges of decreasing yield and dying cocoa trees. After gaining insight into climate-smart cocoa production during basic and dedicated training, she recognized that the lack of shade trees and years of poor farming practices had contributed to the unproductive state of her cocoa farm.

“I have planted 50 mahogany trees I received from DGM. I am confident that the shade trees will protect the new cocoa I am planting from the damaging heat of the sun and improve productivity.”

Two years into the implementation of the Ghana DGM project, Solidaridad has engaged hundreds of young farmers on climate change and the consequences of unsustainable land practices and how they can contribute to efforts towards its mitigation.

As a young female farmer in Damoakrom, Rebecca is receiving support from the project to implement sustainable cocoa farming practices that would positively impact generations.

> "Through the support of the DGM project, I have planted 120 mahogany and frake trees on my farm."

NAME: NICHOLAS LARTEY
COMMUNITY: KUNKUMSO

"Other farmers in my community recognise my farm as a model because of the visible changes I now experience after practising line planting and mulching. The plantains are healthy and green even during the dry season," revealed Mr Nicholas Lartey.

Mr Lartey is a migrant farmer in Kunkumso. Right after benefiting from the training on climate-smart cocoa agriculture, he started applying the new farming methods he had learned about.

Nicholas says he became acquainted with the DGM project through a friend who recommended the project's radio broadcast to him. His friend told him he had personally benefited from the syndicated radio programme even though his community is not one of the DGM project targets. Nicholas added he sees the broadcast as an effective medium for transmitting knowledge about the climate issues affecting farmers and local communities in general.

"Through the support of the DGM project, I have planted 120 mahogany and frake trees on my farm. The community has also planted 300 trees along the Abena River to prevent it from completely drying up during the dry season," he says.

Presently, Nicholas is planting trees on his cocoa farm with support from the project. He is confident that the trees will improve productivity even as he rehabilitates his old farm.

INDIVIDUAL GRANTEES IN THE BONO EAST REGION

"I have planted an acre of cashew trees as my contribution to reversing climate change."

NAME: FRANCIS PIRIPOUR
COMMUNITY: HYIRESO

Climate change is occurring at rates faster than anticipated. It's devastating effects on agriculture, health, property and human life call for urgent actions to reduce the impact. The sustainability of these climate actions can only be achieved when young people are made aware of climate issues and given the requisite support to get actively involved to combat the global menace.

Through the DGM project, Francis Piripour is now contributing to efforts toward building his community's resilience against climate change. Francis is a 26-year-old yam farmer in Hyireso, one of the DGM beneficiary communities within the Bono landscape.

Francis was unaware of the consequences of age-long practices such as slash-and-burn, the removal of trees and the use of young trees as stakes until he joined a series of training organized by Solidaridad under the Ghana DGM project.

"I used to destroy the trees on my yam field with fire because I thought they were not beneficial. But after learning how they mitigate climate change and filter the air we breathe, I have planted an acre of cashew trees as my contribution to reversing climate change."

After receiving training on sustainable yam production techniques, Francis, like other 1,400 farmers, has maximized the output of his yam farm.

"Indeed, planting yam in ridges has allowed me to plant more on the same piece of land. I have more land available to plant maize and plantain. Moreover, given the design of the ridges, I can accommodate more trees on my farm without affecting the quantity of yam I plant. I am happy I no longer have to cut down trees to use as stakes," he says.

Francis is currently being supported to intensify his climate-smart yam production system. He believes that if the DGM project is extended to all rural youth farmers in Ghana, the era of unsustainable agriculture will be a thing of the past.

> "I am convinced that before I pass on, I would have helped to replace some of the trees we have destroyed in this community."

NAME: SUSANNA AKWAA
COMMUNITY: HYIRESO

"When I moved here with my husband 50 years ago, Hyireso was surrounded by thick forests. We did not even have to go into them to hunt for game; the animals came to the settlements. But today you hardly find even grasscutters, not to talk of antelopes. We have lost all these animals," bemoaned Susanna Akwaa, a 76-year-old farmer.

Whether young or old, rich, or poor, the impact of unsustainable land-use practices affects us all, albeit disproportionately. Deforestation contributes to climate change and the loss of diverse plants and animals' resources.

Climate scientists have confirmed that the world experienced its hottest years during the past decade and have warned that global temperatures will continue to rise if conscious efforts in reducing carbon emissions are not strengthened. Regardless of where we find ourselves, inclusivity and participatory approaches are the factors that underpin sustainable forest management.

Despite being a septuagenarian, Susanna is determined to help restore the degraded landscape in her community to its former glory. She is receiving support from Solidaridad, through the DGM project, to replant trees along the community river, which once served the people of Hyireso.

"I have already planted two acres of cashew and frake trees on my farm with the support of the DGM project. I am convinced that before I pass on, I would have helped to replace some of the trees we have destroyed in this community," says Susanna.

> "After learning from the training that planting trees will improve the harsh weather conditions, I have planted 100 trees around the community clinic."

NAME: JOSEPH TAMANGYA
COMMUNITY: ADJALAJA-BEPOSO

"I miss the DGM Radio Broadcast because it was very educative. My family and I used to gather around our radio set to listen to it. My children who were too young to join the training are now aware of the need to plant more trees to address climate change," says Joseph Tamangya, a DGM project beneficiary who lives in the Beposo community.

Solidaridad has leveraged the power of radio as an effective means of disseminating messages to sensitize local communities on climate change and REDD+ practices.

After joining the training in his community, 39-year-old Joseph gained a better insight into climate change and the role trees play in slowing it down.

"The heat is unbearable these days — our crops are dying. After learning from the training that planting trees will improve the harsh weather conditions, I have planted 100 trees around the community clinic," says Joseph.

Joseph has also planted two acres of cashew trees and 50 mahogany trees on his farm. Today, he is restoring the lost vegetation along the Pru river in his community with grants from the Ghana Dedicated Grant Mechanism for Local Communities project.

STORIES FROM GRANTEES

Accounts of Communities and Community-Based Organizations

> "Now we want to raise tree seedlings that are going extinct. We believe this will restore the beautiful diversity of the forests in this community and other neighbouring communities."

NAME: PEACEFUL TREE AND MAIZE COOPERATIVE
COMMUNITY: KORADASO, BONO REGION

"We knew that trees were beneficial, but it was the DGM project that really elaborated on how they are linked to climate change and the urgency to plant more trees," says Angela Ngmensamgme, a member of the Peaceful Tree and Maize Cooperative.

Koradaso is a DGM project community in the Bono region. Besides the support the project is providing to individuals to reduce the impact of climate change on their livelihoods, it is also empowering its community-based organization (CBO) to be more climate-focused in its operations.

"Now we want to raise tree seedlings that are going extinct. We believe this will restore the beautiful diversity of the forests in this community and other neighbouring communities," says Ophelius Siebekpiir, chairman of the CBO.

The Peaceful Growers' Association has also been equipped with improved methods of beekeeping, honey extraction machines, smokers, beekeeping suits, wax, beehives, and other tools.

"Before the DGM project, we had no reliable source of income to undertake initiatives as a group. But now, we are harvesting honey multiple times a year, which is providing us with an all-year-round income. We are using the money to raise more seedlings for our members and other individuals who are interested in planting trees on their farms," Georgina Kuubenyere, treasurer of the CBO says.

CBO members harvesting honeycomb from beehives set up in the forest

The Chairman of the association, Ophelius Siebekpiir, says Solidaridad has provided them with poly pots and other nursery essentials to establish a tree nursery site with reliable water supply where indigenous and endangered tree species can be raised to enrich degraded forests.

He adds that the Peaceful Tree Growers' Association is confident of sustaining the beekeeping and tree nursery initiatives, thanks to the extensive training Solidaridad has provided on organizational development, group dynamics, climate response and REDD+ processes under the project.

> "This community has a monkey sanctuary, which we need to protect and redevelop for the long-term economic benefit. This is why I have dedicated more forest lands for this purpose."

NAME: COMMUNITY ECOTOURISM MANAGEMENT CENTRE
COMMUNITY: DUASIDAN, BONO REGION

The DGM project is supporting the Ecotourism and Development Committee in Duasidan to revamp its monkey sanctuary.

With the aim of becoming one of the best ecotourism sites within the Bono landscape, local authorities have earmarked more than 60 acres of forest lands as protected and strictly prohibited hunting, farming, and logging activities.

"Most of the communities around us have lost valuable forests through bush burning and illegal logging. Through the DGM project, we now know that when we protect our forests, we can improve the harsh weather conditions we are experiencing today," says Nana Oppong Kyekyeku Ababio, chief of Duasidan.

"This community has a monkey sanctuary, which we need to protect and redevelop for the long-term economic benefit. This is why I have dedicated more forest lands for this purpose," he added.

To enable the committee to implement and sustain the support received from the project, Solidaridad engaged the members of the community committee in organizational, financial and conflict management, among others.

"The project has supported us to develop a constitution and opened a bank account. We have also restructured the entire Committee to make it more focused and effective based on the new knowledge we gained from the DGM training on leadership and group dynamics," says Joseph Peprah Marfo, chairman of the Duasidan Ecotourism and Development Committee.

Solidaridad has worked closely with the local authorities, traditional rulers and management of the monkey sanctuary to enhance the outlook of the site and formalize its operations to increase patronage. The creation of hiking trails, walkways and labelling of tree species of economic and socio-cultural values have been done to excite patrons. The construction of an office and a guest reception area is also underway.

The office and reception area under construction

The group has planted over a thousand ceiba, mansonia, mahogany and frake trees in the sanctuary with support from the project. Similarly, Solidaridad has supplied individual farmers within the community with various indigenous tree species and cashew trees.

Having prioritized a solar-powered borehole as a key climate response intervention for the community, Victoria Donkor, a member of the community indicates that the borehole would provide potable water for them, as well as the monkeys in the dry season.

> "The training has improved the group's development and empowered members to contribute to efforts towards restoring the degraded sacred grove in the community."

NAME: THE AGROFORESTRY GROUP
COMMUNITY: JOMORO, WESTERN NORTH REGION

The criterion for joining the Agroforestry Group in Jomoro is to have trees on your farm. Since its inception in 2011, the community-based organization has been involved in several tree planting and developmental projects in the community.

However, the management and the organizational structure of the group had challenges that needed to be addressed.

After a risk assessment process, Solidaridad identified gaps which the Agroforestry Group needed support with. On the back of the assessment, the group was extensively engaged in organizational development, group dynamics, climate response, REDD+ processes, and how its activities are linked to these concepts.

"Before the DGM training, we had challenges with record-keeping and our constitution. We did not have structures that worked, and that caused a lot of arguments and rifts between executives and members," says James Danso, the vice-chairman of the group.

"The training has improved the group's development and empowered members to contribute to efforts towards restoring the degraded sacred grove in the community."

With support from the project, the Agroforestry Group has raised close to 6,000 tree seedlings, some of which have been planted along the Butue river, on individual farms, as well as the community's sacred grove. "

Similarly, the group is producing honey under sustainable and environmentally sound conditions after receiving hands-on training on improved beekeeping techniques and equipment.

"Since we started beekeeping, people have become more protective of the forest because they do not want to drive away the bees or destroy the boxes that produce the honey," says Hayford Duodu, chairman of the CBO.

As part of their revised mandate, Cecilia Quarcoo, a member of the group says they periodically use radio and the information centre to re-sensitize community members in Jomoro on climate change and the role of trees in mitigating it.

A CBO member transporting seedings

FROM BARE TO GREEN: COMMUNITY AFFORESTATION EFFORTS RESTORE DEGRADED LANDSCAPES

Over 400 acres of degraded lands in 19 communities across the Bono, Bono East and Western North regions in Ghana have been restored through various initiatives, such as the establishment of cashew and tree plantations, woodlots and watershed management.

Ten communities and nine community-based organizations, with support from the Ghana Dedicated Grant Mechanism (DGM) Project implemented by Solidaridad West Africa, have executed the tree planting initiatives to increase carbon stock and mitigate the impacts of climate change in their communities.

Funded by the World Bank, the project has been supporting individuals, local communities and community-based organizations with a small grant to implement climate actions that help improve their livelihoods and benefit the environment.

In 2019, the 19 communities received over 435,000 cashew and economic tree seedlings for the restoration of degraded landscapes in and around their area.

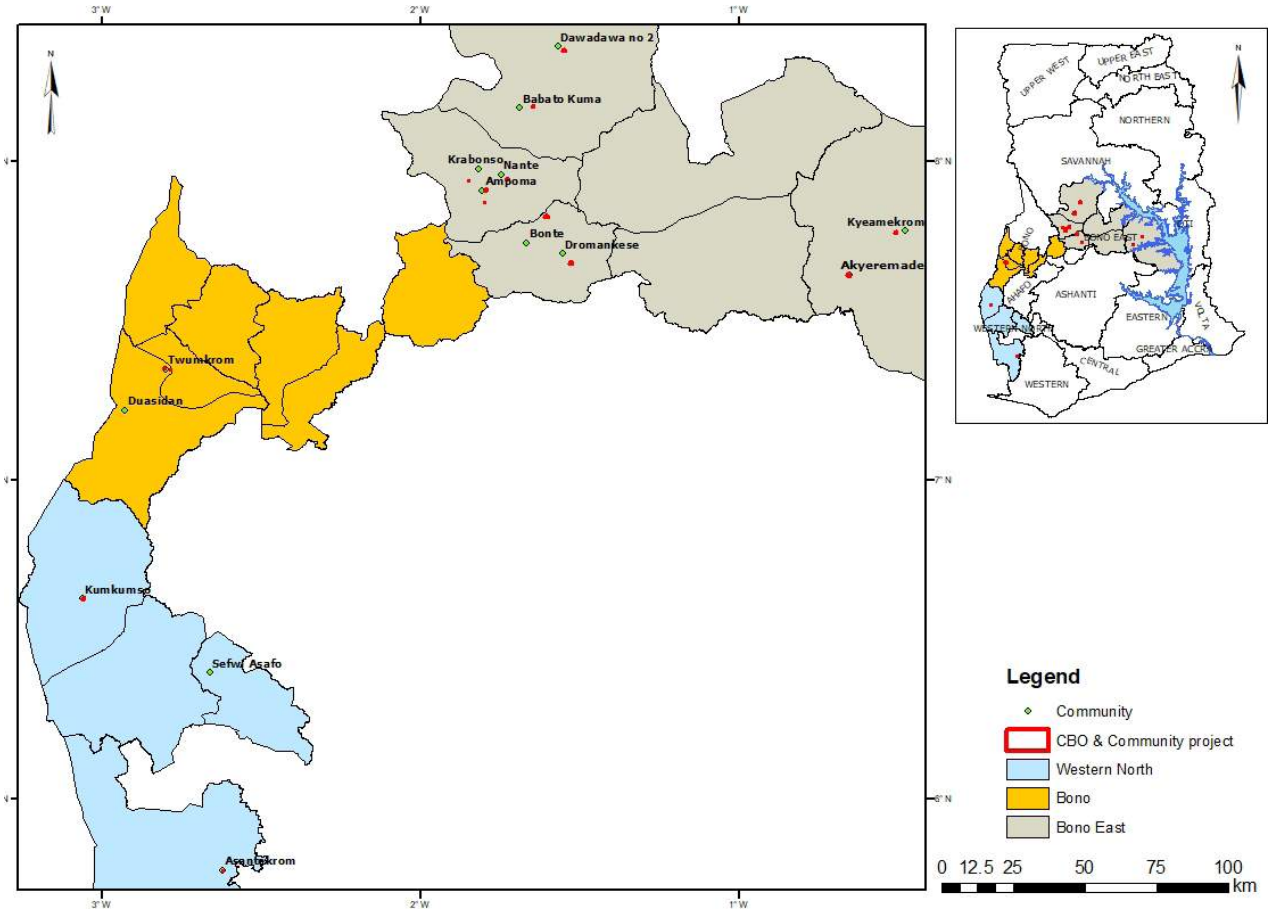


Figure 2. Distribution of afforestation sites across the three regions

Leveraging the adaptation and mitigation co-benefits of cashew agroforestry

Under the DGM project, Solidaridad has been promoting the agroforestry method of incorporating tree crops such as cashew with economic trees as a sustainable land-use model to facilitate landscape restoration while generating income for local communities.

Cashew is preferred by local communities in the transition landscape of the Bono and Bono East regions where the crop grows and adapts well, offering a reliable return on investment. Since 2019, farmers in the beneficiary communities including Babato Kuma, Dawadawa, Bonte, Zabrama, Twumkrom, Dromankese, Akyeremade, Nsuhia and Nante have been involved in the planting of thousands of cashew and timber trees.

"As a community, we are happy to be contributing to climate mitigation by transforming a 20-acre bare land into a cashew plantation. Indeed, the greens we see all around us is good for the environment, but we know, also, that we can benefit from the trees economically. In fact, we are confident that the proceeds from this initiative can help us to revamp our senior high school," says Abubakar Siedu, the community focal person for the DGM project in Babator Kuma.

Two-year-old cashew plantation with legumes as underplants

Abubakar attributes the high survival rates and spur in growth of the cashew trees to the good quality seedlings and field supervision Solidaridad provided, as well as the community's commitment to safeguarding the investment.

Abubakar attributes the high survival rates and spur in growth of the cashew trees to the good quality seedlings and field supervision Solidaridad provided, as well as the community's commitment to safeguarding the investment.

"Some migrant farmers, who are largely women, are already benefiting from the intervention by underplanting maize and groundnuts in the plantation for additional income while they tend the cashew trees until maturity," he added.

Some women harvesting groundnuts from the cashew plantation

Similarly, in the Dromankese community, the Charcoal Buyers and Tree Planters Association, a community-based organization, have established 13 acres of cashew and eight acres of mahogany and acacia woodlot on fallow lands.

Kwabena Awade, the vice-chairperson of the group said they are looking forward to their first harvest in the next 7 months.

He indicated that the group was also excited about the progress of the woodlot, which would provide charcoal producers in the community with a sustainable source of wood for their business instead of depending on the forest.

"Incidentally, through the climate awareness created by the DGM project, our members are now more environmentally responsible in our trade, always exploring sustainable ways of producing charcoal," says Awade.

Tree plantations

In some jurisdictions, local communities and community-based organizations have preferred planting pure stands of economic trees. So far, 100,000 of such trees have been planted at different sites to restore the vegetative cover of over 300 acres of degraded sacred groves and forest lands, across the three project regions.

"For us, it is fulfilling to be part of a project that is reversing years of deforestation. We have planted over 6,000 trees and our last count revealed a survival rate of over 75 percent. We are certainly proud of what we have achieved together with Solidaridad," says Gilbert Sanchez, a leader of the Asafo community.

Trees planted at the sacred grove

Restoring watersheds

In other communities, the local people have opted to safeguard community rivers and streams by establishing natural vegetation around water bodies.

"But for the DGM project intervention, the watershed which drains the Bosmoamoa river would have become a wasteland due to the wanton destruction of vegetation along the river. But after planting trees on the 17-acre watershed and creating a buffer zone, we have started experiencing a steady increase in the volume of water," says Confidence Appiah, a member of the Ampoma community.

Two-year-old riparian trees along the Bosomamoa

Building community resilience against climate change

"The interventions we provide under the DGM project build the resilience of local communities while enabling them to contribute to efforts towards realising Ghana's commitment toward the Nationally Determined Contributions to reduce emissions and adapt to the impacts of climate change," says Dr Winston Asante, the DGM project coordinator.

The Ghana Dedicated Grant Mechanism project is in line with Solidaridad's climate innovations and sustainable landscape agenda. Solidaridad mainstreams climate action in all interventions by building the capacities of farmers and communities to adapt to climate impacts while reducing their carbon footprints.

PROVIDING LIFELINES FOR LOCAL COMMUNITIES THROUGH SOLAR-POWERED BOREHOLES

Extreme rainfall variability, long dry spell and high temperatures have resulted in water scarcity for over three million people who rely on surface waters to survive in Ghana.

This is especially telling in rural communities that also contend with high incidences of diarrhoea and typhoid due to the poor quality of the water they depend on.

"Over the years, our community relied heavily on the Pru River, which gets silted after a downpour and dries up multiple times a year when it does not rain. This forced us to turn to a neighbouring community three miles away for potable water," says Wisdom Nfabi, a member of the Bayaa community, in the Bono East region of Ghana.

The Ghana Dedicated Grant Mechanism project, implemented by Solidaridad West Africa with funding from the World Bank, has supported 37 local communities with solar-powered boreholes for easy access to potable water and to help them deal with climate impact.

Bayaa is one of the communities that has benefited from the borehole, which is catering to the needs of thousands of rural folks using a renewable energy source to ensure all-year-round water availability for households and agriculture.

"The presence of a solar-powered borehole in our community is a real life-changing experience for many of us. Our lives depend on it. At least, we are assured of reliable, safe drinking water," says Wisdom.

Community members collecting water from the DGM borehole1

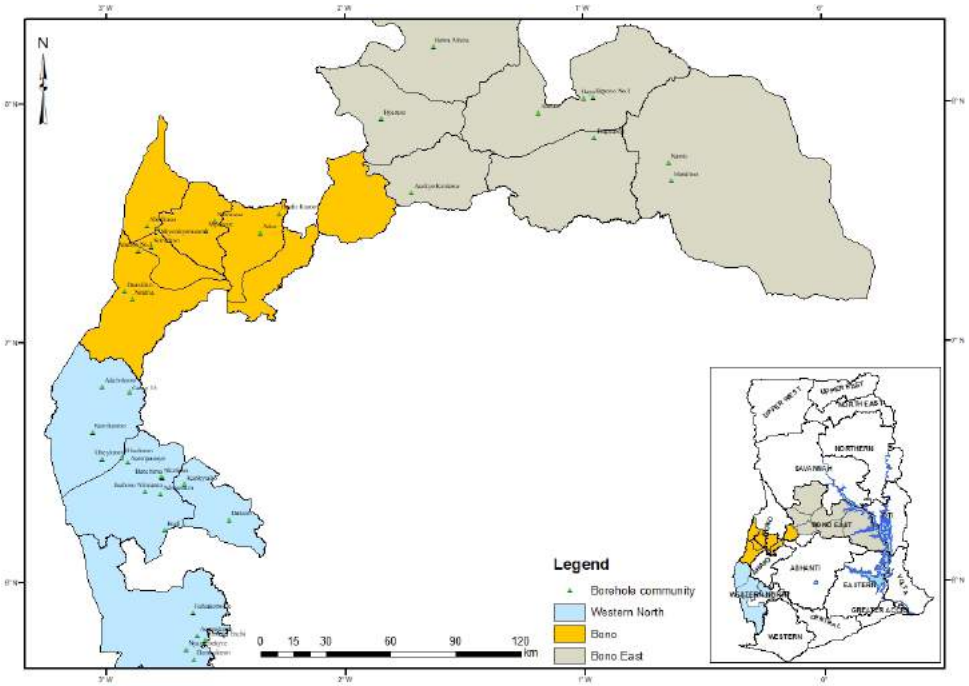


Figure 3. DGM Borehole sites across the three regions

Providing relief for women and girls

Besides providing access to safe drinking water, the presence of the boreholes in the rural communities has also reduced the burden of women and girls who often trek several miles to collect water for household use.

Mary Aboagyewaa in the Abease community of the Bono East region says she can now afford to spend more time on her farm since she no longer takes the long and dangerous walk, multiple times a day, to collect water.

"Each morning, before heading to the farm, I had to travel five miles with my gallons to collect water from the river whenever the community dugout dried up. This made me tired even before I arrive at the farm. It really affected my productivity. But now, thanks to the solar-powered borehole located at close proximity, I can spend enough time on my farm and get enough rest too," says Mary.

Mary collecting water from the borehole for her household

For Sandra Pokua Birago, a 15-year-old student who lives in the Asekye Krokese community in the Bono East region, the proximity of the new borehole to her home means spending less time fetching water, but more for her schoolwork.

Sandra says the borehole is also making it possible for her to maintain personal hygiene and to observe proper handwashing as part of measures to control Covid-19 at home and in school.

Sandra Birago with some community members at the borehole

Sandra Birago washing her uniforms using water from the borehole

Serving as an irrigation source

For the people of Koradaso, a beneficiary community in the Bono region, the borehole meets more than their domestic water needs. It also serves as a source of water for the irrigation of a community-based tree nursery funded by the project. The nursery, which is run by the Peaceful Tree and Maize Cooperative, a community-based organization, is enabling them to raise tree seedlings for afforestation, throughout the year.

A tank at the nursery site for storing water for irrigation

"Before the construction of the borehole, access to water for irrigation was a huge challenge that affected the survival of the seedlings and stalled our activities. Sometimes we had to transport water from some neighbouring communities for irrigation at a high cost," says Ophelius Siebekpiir, the chairperson of the community-based organization.

Out of the 20,000 economic tree seedlings recently raised by the group, Ophelius says they recorded an unprecedented high survival rate of about 85 percent.

A member of the group using water from the borehole to irrigate tree seedlings

The Ghana Dedicated Grant Mechanism project has linked the community-based organization with the Ghana Forest Investment Programme (G-FIP) to grow the seedlings to restore degraded forests, under a modified taungya system, in which some food crop cultivation is allowed until the seedlings are old enough to close canopy.

Change beyond direct beneficiaries

Beyond the direct beneficiary communities, the boreholes also serve other neighbouring communities that have challenges with water. William Oppong Boadu, the community focal person for the project in Nsuhia, a project community in the Bono region indicates that some folks from the surrounding communities like Kokrosua and Twetweboasu, make trips to the community to fetch from the borehole.

"It is rewarding to see that the boreholes have eased the water stress on both our direct and indirect beneficiaries. Improving access to potable water is key to ensuring the wellbeing of people, particularly as the climate crisis deepens amid the COVID-19 pandemic," says Dr Winston Asante, the project coordinator for the Dedicated Grant Mechanism project at Solidaridad.

"It is heartwarming to witness the change the boreholes have brought to these vulnerable communities to enable them to thrive while contributing to Ghana's attainment of the Sustainable Development Goals 3, 6, 7, and 13."

DELIVERING CLIMATE-SMART SOLUTIONS FOR RESILIENT COCOA PRODUCTION SYSTEMS

Unsustainable traditional cocoa production practices continue to worsen the cycle of climate change, posing a significant threat to farmers' livelihoods.

In Ghana, these practices, which include full sun cocoa production and the use of slash-and-burn methods during land preparation, have rendered a lot of cocoa farms vulnerable to the harsh impact of climate change. This threatens the long-term productivity of the commodity and puts the future of the cocoa sector at risk.

To build resilient cocoa systems , Solidaridad mainstreams climate-smart cocoa production, which encompasses good agronomic practices, and aims to enable farmers adapt to climate change, improve productivity and reduce greenhouse gas emissions.

Under the Ghana Dedicated Grant Mechanism for Local Communities (DGM) project, which is implemented by Solidaridad West Africa, over 600 cocoa farmers in the Western North region have benefitted from training in climate-smart cocoa production practices. These include the slash-and-mulch method, adherence to recommended spacing for planting, enhanced holing for water retention, crop diversification, and agroforestry practices.

Of this number, 50 smallholders received small grants from the DGM project to establish climate-smart cocoa farms on 101.6 acres of land.

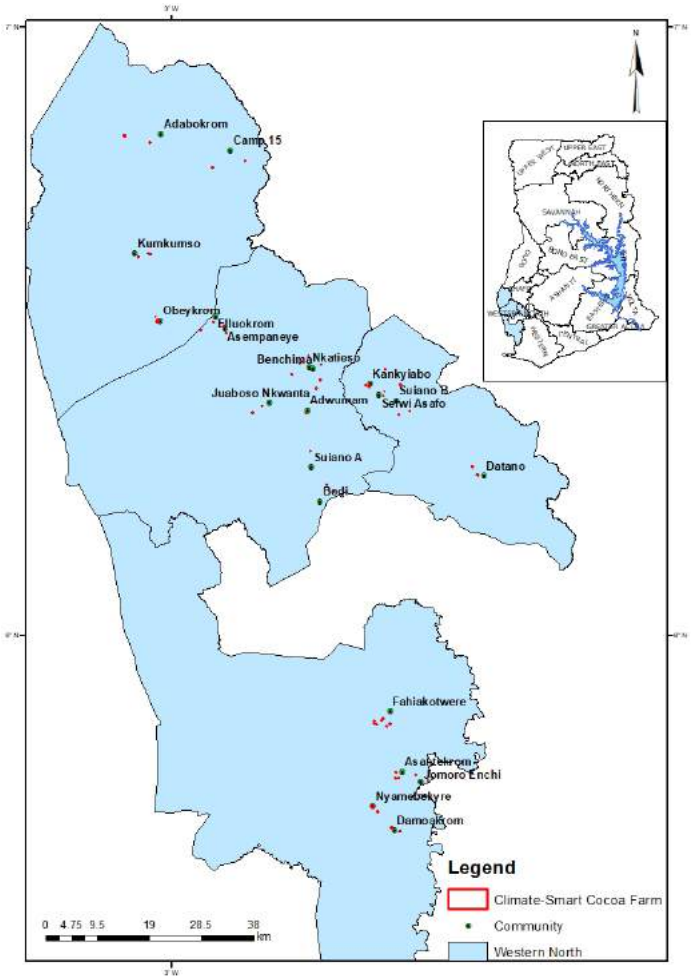


Figure 4. Distribution of climate-smart farms by grantees

Increasing smallholders' adaptation to climate change

Solidaridad promotes the planting of shade trees on cocoa farms to enable farmers adapt to rising temperatures, irregular rainfall patterns and long dry spells, which characterize climate change in farming communities.

In young cocoa farms, incorporating food crops also provides temporary shade that protects the cocoa plants from extreme heat and water stress.

Osman Adam, who recently rehabilitated his cocoa farm and intercropped with plantains using DGM project small grants shares his experience.

"My newly established cocoa farm is doing very well because I intercropped with plantains using the spacing recommended by the DGM project. I observe that the plantains protect the young cocoa trees from withering."

Solidaridad also encourages tree diversification through the integration of different tree species that are compatible with cocoa to enable farmers to transition from full sun to shade cocoa production.

Osman says he has also planted about 60 trees of commercial value like frake, emire and mahogany on his farm.

"I now understand that the trees will provide the right conditions that would protect the cocoa and enhance its productivity. Though I planted them only last year, some trees are almost twice my height, thanks to the new techniques we were taught by Solidaridad," he says.

Osman showing one of the trees planted on his cocoa farm

Enhancing farmer livelihoods through crop diversification

Solidaridad mainstreams on-farm crop diversification as an integral practice of climate-smart cocoa production and thus provides farmers with improved food and leguminous crop planting materials, such as maize seeds, plantain suckers and beans to incorporate in their farms. This practice enables smallholders to earn additional income and increase their household food stock.

"So far, I have harvested five bags of maize (500kg) from my new two-acre cocoa farm. While we depend on some to meet the household food needs, I am currently preparing the rest for sale in the dry season when they would be in high demand,"says 60-year-old Simeon Lartey, a grant beneficiary in the Adwumam community.

"As a father of nine, four of whom are still under my care, I would use the proceeds to support their education."

He added that the over 890 plantain suckers he had planted would also provide his family with additional income.

Simeon in his newly established climate-smart farm

Simeon says incorporating legumes like beans help to suppress weeds and facilitate the rapid growth of crops without the use of chemical fertilizers.

So far, over 17,000 smallholder farmers have been trained in sustainable climate-smart practices in 53 communities across the Western North, Bono and Bono East regions of Ghana. The project, which is funded by the Climate Investment Fund through the World Bank, has increased the awareness of local communities on climate change and how to adapt to its adverse impacts on agriculture.

REDUCING THE CARBON FOOTPRINTS OF RURAL HOUSEHOLDS WITH IMPROVED COOKSTOVES

Seven hundred beneficiaries of the Ghana Dedicated Grant Mechanism for Local Communities project in five rural communities across the Western North, Bono and Bono East regions are now using environmentally-friendly household cookstoves.

The improved firewood and charcoal cookstoves are part of the project's goal of supporting local communities to reduce greenhouse gas emissions and sustainably reduce their reliance on firewood and charcoal. This comes after Solidaridad created awareness of the causes of climate change and its impact on livelihoods. More than 17,000 rural folks benefitted from this sensitization.

Beneficiaries in Suiano A community receive their cookstoves

Traditional cookstoves and climate change

Traditional household cookstoves, locally made from either mud or metal scraps, use firewood and charcoal as fuel. They usually have open spaces and require the use of large quantities of fuel, leading to extensive and unsustainable harvesting of wood contributing to deforestation. The burning of fuel — firewood and charcoal — associated with using these stoves produces high levels of emissions that contribute to climate change.

A beneficiary shows her old firewood mud stove with open sides

The traditional charcoal cookstove has a front opening that burns up the charcoal quickly

"When I was using the local stoves, I had to collect a lot of firewood because it got burnt up quickly as a result of the open fire," says Akua Yeboah, a beneficiary in Krabonso, a community in the Bono East region.

Unlike traditional cookstoves, the improved ones supplied by Solidaridad have low combustion characteristics and thus, reduce the use of firewood and charcoal by 71% and 65%, respectively.

"With the new cookstove from DGM, my consumption of firewood has reduced drastically. Now, I can use the same quantity of firewood I would have used in one day with my old stove, in a week," says Akua.

She indicates that she also spends less time in search of firewood.

The improved charcoal cookstove emits up to 64% less smoke compared to traditional cookstoves, making it a healthy alternative for beneficiaries aside from being climate-friendly.

A beneficiary receives an improved charcoal cook stove from a DGM officer

"I used to experience headaches and nasal congestion from the high levels of smoke from my old stove sometimes. But with this DGM stove, there is very little smoke and the food cooks faster," says Diana Nkuah, a beneficiary in the Western North region.

Diana adds that the new stove has a closed chamber that keeps the charcoal and ashes during cooking, thereby saving her the trouble of sweeping the ashes from her kitchen after every cooking.

Easy on the pocket

The environmentally friendly cookstoves also serve as a low-cost but efficient alternative for rural folks. Users are able to make over 65% savings on fuel.

For Isaac Hene, a beneficiary in the Kotaa community in the Bono region, who now uses a charcoal stove, the savings he would make from his reduced use of fuel to cook for his household of 11, means more money for other expenses.

"One bag of charcoal, which costs 40 Ghana Cedis (6.6 dollars) used to last us for a month with my old stove. But with the new stove, I can confidently say that a bag of charcoal would last for two and a half months or more," he says.

"The savings would be a good investment for my farm."

This intervention is funded by the World Bank and contributes to the Sustainable Development Goals 3, 7, 8, and 13.

A beneficiary receives the low-cost improved charcoal cook stove

SECURING THE GAINS OF CLIMATE-RESPONSE INTERVENTIONS BEYOND THE DGM PROJECT LIFE

As the Ghana Dedicated Grant Mechanism for Local Communities project draws to a close, Solidaridad has put in place robust measures to ensure that the impacts of the climate-response interventions are sustained after the project ends.

Over the last three years, 156 individuals, 53 communities and nine community-based organizations have benefited from varying sums of small grants to undertake sustainable initiatives that build their resilience to climate change while decreasing their carbon footprints.

The climate-response initiatives supported under three grant components of the project — individual, community and community-based organizations — include:

1. Climate-smart production systems for cocoa, cashew and yam cultivation
2. Construction of solar-powered boreholes
3. Afforestation of degraded community lands
4. Restoration of riparian vegetation
5. Climate-smart apiculture systems

To safeguard these interventions and to ensure their sustainability, Solidaridad has worked with beneficiaries and the National Steering Committee of the project to implement exit strategies. The committee, largely made up of representatives from beneficiary communities, provides oversight responsibility for the project.

Exit Strategies

For all the initiatives supported under each of the grant components, measures have been undertaken to secure their continuity and maintenance after the Ghana Dedicated Grant Mechanism project has ended.

Individual Grant Initiatives

To ensure that rural cocoa farmers who have benefited from the individual grants have the financial capacity to continue with the climate-smart practices they have learned, Solidaridad has heavily promoted intercropping among the farmers. These multiple cropping systems are enabling farmers to earn income from the sale of food crops, such as maize, plantain, cocoyam and cowpeas while serving their household needs.

Solidaridad provided farmers with improved varieties of these food crops. Improved cultivars, with tolerance to disease and environmental shocks, like droughts, help farmers adapt to climate change, ensure food security and improve livelihoods. This is crucial for farmers who have, through the support of the DGM project, rehabilitated their diseased farms using innovative agroforestry practices, and are awaiting the maturity of their cocoa trees.

Solidaridad provided farmers with tree species and training on planting models that show that the trees were planted, and not naturally occurring. This approach is essential in supporting farmers' claim of ownership of on-farm trees in a pending tree registration exercise by the Resource Management Support Centre of Ghana's Forestry Commission. The ability of farmers to demonstrate ownership of trees on their farms solidifies their interest in keeping and protecting them for the sustainability of the cocoa agroforestry systems established under the project.

Also, key stakeholders such as the Ministry of Food and Agriculture, Forest Services Division and Ghana Cocoa Board have been engaged extensively in the implementation of the DGM project. Through these stakeholder engagements, the Ghana Cocoa Board has been supplying beneficiaries under the project with inputs and they commit to continue to do so even after the project has ended.

Initiatives under Grant for Communities and Community-based Organizations

Initiatives undertaken by communities and community-based organizations under the DGM project were largely the establishment of cashew and tree plantations, and the construction of solar-powered boreholes.

To safeguard the long-term sustainability of these community-level projects while empowering beneficiary communities to take charge of their management, Solidaridad constituted Project Implementation Committees, which comprises representatives of the traditional authorities, opinion leaders, queen mothers, local assembly, women and youth groups in each beneficiary community.

This all-inclusive committee would enhance participatory decision-making and ensure equity in the distribution of benefits to promote a keen sense of ownership and accountability.
In addition to this, Solidaridad has put in place other measures that are unique to a specific subproject.

For instance, in communities with solar-powered boreholes, Water and Sanitation Management Teams (WSMTs) have been formed in partnership with the Planning Unit of the various District and Municipal Assemblies to manage the boreholes. These teams have been trained and supplied with the requisite tools to effectively undertake repairs and routine maintenance works on the water systems.

In communities where afforestation and reforestation activities have taken place, the DGM project has supported the creation of bare ground fire belts and green fire belts, particularly in fire-prone areas. These are expected to break bushfires that have the potential of ravaging community-owned plantations.

The project, with the consent of the project implementation committees, has allowed some community members to cultivate food crops on community lands used for cashew and tree plantations. These farmers are serving as short-term caretakers for the young plantations while they grow staples like maize and groundnuts for food and income. As the project folds up and the funding used for cultural maintenance ceases, it is expected that a portion of the returns from the sale of the food crops would be invested in the general management of the cashew and tree plantations until their maturity.

Similarly, Solidaridad has worked with community-based organizations that are undertaking tree planting activities to implement a similar plan of action to allow dedicated community members to tend the plantations while they farm on those lands.

Ghana Dedicated Grant Mechanism for Local Communities project is a five-year project funded by the World Bank. The project has strengthened the capacity of local communities to participate effectively in REDD+ processes and created livelihood opportunities that also generated mitigation and adaptation benefits while respecting culture, traditional knowledge and indigenous forest management systems.

DISCLOSURE OF THE IMPLEMENTATION OF SUBPROJECTS ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Solidaridad West Africa is the National Executing Agency (NEA) for the Ghana Dedicated Grant Mechanism for Local Communities (G-DGM) project with financial support from the Climate Investment Fund (CIF) and the World Bank.

The Ghana DGM project is designed to promote the inclusion of forest-rich communities in efforts to reduce deforestation and degradation through capacity building to strengthen knowledge and practices of targeted local communities in REDD+ processes and the Ghana Forest Investment Programme (G-FIP) towards sustainable forest management. The project has been implemented in 52 local communities selected based on complementarity to the Ghana Forest Investment Programme.

The project has built capacities and provided communities, individuals, and community-based organizations (CBO) within local communities in the Western North, Bono, and Bono East regions with demand-driven grants to implement selected subprojects.

Solidaridad West Africa has prepared an Environmental and Social Management Plan (ESMP) for the implementation of subprojects within the 52 selected local communities in accordance with the World Bank's Operations Policies and applicable national regulations. The ESMP shall be used as a guide to avoid, minimize and or mitigate environmental and social impacts of the subprojects. The table below indicates the subprojects and their locations.

G-DGM PROJECT BENEFICIARY COMMUNITIES AND SELECTED SUBPROJECT

SN	Community	District	Region	Selected Subproject
1	Adabokrom	Bia East	Western North	Solar-powered borehole
2	Camp 15	Bia East	Western North	Solar-powered borehole
3	Kumkumso	Bia west	Western North	Solar-powered borehole
4	Elluokrom	Bia West	Western North	Solar-powered borehole
5	Obeykrom	Bia west	Western North	Solar-powered borehole
6	Adwumam	Juabeso	Western North	Solar-powered borehole
7	Asempaneye	Juabeso	Western North	Solar-powered borehole
8	Benchima	Juabeso	Western North	Solar-powered borehole
9	Juaboso Nkwanta	Juabeso	Western North	Solar-powered borehole
10	Nkatieso	Juabeso	Western North	Solar-powered borehole
11	Sefwi Asafo	Sefwi Wiawso	Western North	Afforestation project
12	Suiano B	Sefwi Wiawso	Western North	Improved Cookstoves
13	Datano	Sefwi Wiawso	Western North	Solar-powered borehole
14	Kankyiabo	Sefwi Wiawso	Western North	Solar-powered borehole
15	Bodi	Bodi	Western North	Solar-powered borehole
16	Suiano A	Bodi	Western North	Improved Cookstoves
17	Asantekrom	Aowin	Western North	Solar-powered borehole
18	Damoakrom	Aowin	Western North	Solar-powered borehole
19	Fahiakotwere	Aowin	Western North	Solar-powered borehole
20	Jomoro Enchi	Aowin	Western North	Solar-powered borehole

21	Nyamebekyre	Aowin	Western North	Solar-powered borehole
22	Abease	Pru West	Bono East	Solar-powered borehole
23	Zabrama	Pru West	Bono East	Cashew agroforestry
24	Benim	Pru West	Bono East	Solar-powered borehole
25	Beposo	Pru West	Bono East	Solar-powered borehole
26	Baaya (Prang)	Pru West	Bono East	Solar-powered borehole
27	Praprabon	Atebubu Amantin	Bono East	Solar-powered borehole
28	Menko	Sene West	Bono East	Solar-powered borehole
29	Kanto	Sene West	Bono East	Solar-powered borehole
30	Akyeremade	Sene West	Bono East	Cashew agroforestry
31	Mpatasie	Berekum	Bono	Solar-powered borehole
32	Nkyenkyemanmu	Berekum West	Bono	Solar-powered borehole
33	Namasua	Berekum	Bono	Solar-powered borehole
34	Kotaa	Berekum	Bono	Improved Cookstoves
35	Koradaso	Dormaa East	Bono	Solar-powered borehole
36	Asunso no.1	Dormaa East	Bono	Solar-powered borehole
37	Nsuhia	Dormaa	Bono	Solar-powered borehole
38	Duasidan	Dormaa	Bono	Solar-powered borehole
39	Twumkrom	Dormaa	Bono	Cashew agroforestry
40	Boffourkrom	Sunyani West	Bono	Solar-powered borehole
41	Adoe	Sunyani West	Bono	Solar-powered borehole
42	Abirikaso	Jaman South	Bono	Solar-powered borehole
43	Ampoma	Kintampo South	Bono East	Afforestation project
44	Nante	Kintampo South	Bono East	Afforestation project
45	Krabonso	Kintampo South	Bono East	Improved Cookstoves
46	Hyereso	Kintampo South	Bono East	Solar-powered borehole
47	Dawadawa no 2	Kintampo North	Bono East	Cashew agroforestry
48	Babato Kuma	Kintampo North	Bono East	Cashew agroforestry
49	Bawa Akura	Kintampo North	Bono East	Improved Cookstoves
50	Bonte	Nkoranza North	Bono East	Cashew agroforestry
51	Dromankese	Nkoranza North	Bono East	Cashew agroforestry
52	Asekye Krokese	Nkoranza North	Bono East	Solar-powered borehole

The ESMP outlines the applicable Acts, Regulations, Policies, Environment and Social Conditions of a Project Area, Potential Environmental and Social Impacts of Subprojects, Mitigation Measures, and Grievance Redress Mechanism among others.

Copies of the ESMP are now available at the Head Office of Solidaridad West Africa – Accra, Ministry of Lands and Natural Resources – Accra, Environmental Protection Agency (EPA) – Accra, Forestry Commission– Accra, Works Department of participating Municipal and District Assemblies, Unit Committee of project communities, and palace of chiefs in project communities.

This public notice can also be found on the website of Solidaridad Network www.solidaridadnetwork.org. For further enquiries on this disclosure, please write to; ghana@solidaridadnetwork.org, winston@solidaridadnetwork.org, bossman.owusu@solidaridadnetwork.org, edward.kyere@solidaridadnetwork.org.

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