



EBAFOSA UGANDA TRAINING REPORT

**ECOSYSTEM BASED
ADAPTATION TRAINING
REPORTS FOR VILLAGE
SAVINGS AND LOAN
ASSOCIATION
(VSLA)**

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Figure 1 Nsonga Village Savings and Loan Association practicing intercropping and growing cassava organically. Photo: UNEP-EBAFOSA Uganda

INTRODUCTION

Ecosystem-based adaptation (EbA) is the use of biodiversity and ecosystem services as part of an overall strategy to help people to adapt to the adverse effects of climate change (Seddon et al., 2016). According to Global EBA Fund, Ecosystem-based Adaptation (EBA) harnesses the power of nature to increase the resilience of communities against the escalating impacts of climate change. Agriculture continues to be the main source of food, employment and income for many people living in developing countries. Indeed, it is estimated that about 75% of the world's poor live in rural areas, with agriculture being their most important income source (Lipper et al., 2014) In Uganda Current and future impacts of climate change make adaptation urgent (MWE, 2015) is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC the economy and wellbeing of the population are highly dependent on weather and climate. The country experiences increased frequency and severity of extreme weather events disclosed in more erratic rainfalls and prolonged dry spells due to climate variability and change. Climate disasters and risks are already negatively impacting the economy with severe negative impacts on the agriculture, water, energy and infrastructure sectors.

Against this back drop that UNEP-EBAFOSA Uganda conducted an EBA training to empower women village savings

and loans association (VSLAs) using Ecosystem-based Adaptation approaches to address climate change among smallholder farming communities in Uganda. This work is helping rural women village savings and loan associations to apply climate action solution to benefit their households, restore agricultural systems by using natural based solutions to grow crops. Some farmers are reducing tillage and adopting natural fertilizers and pest control. Using land fallowing, crop rotations of cassava with beans and maize, using improved and drought resistant crop varieties this has enhanced income, food and nutrition security for households. With planting crops organically can restore biodiversity and provide more nutritious diets.

In order to achieve the Sustainable Development Goals, reach global biodiversity targets and effectively address climate change, nature-based solutions should be treated as integral to adaptation strategies at global, national and local levels *and* Ecosystem-based Adaptation (EbA) is a nature-based solution that harnesses biodiversity and ecosystem services to reduce vulnerability and build resilience to climate change.

CONTEXT

The Ecosystem Based Adaptation training was designed to cater to the needs of the VSLAs women groups in their locality and Follow up, visits, methods of demonstration, field monitoring and face to face meetings were done for the trainings to be effective and efficient.

This work started Ecosystem-based Adaptation (EbA) training on nature-based solution to harness biodiversity and ecosystem services to reduce vulnerability and build resilience to climate change. Furthermore, these trainings enabled VSLAs on taking in ecosystems-based adaptation to restore agricultural ecosystems by using nature to boost farm productivity, improve land fertility and introduce improved cassava varieties. 5 VSLAs led by women where trained and 150 beneficiaries gained directly from the EBA trainings who were VSLA members.

In total, 5 VSLAs were trained, Nsonga VSLA, Ggera Fortune Women group, Sugu Agalyawamu women group, Nakifuma Tweekembe Women Group VSLA and Mukama Mulungi VSLA. This work was implemented in three districts including Buikwe, Luwero located in cattle corridor and Mukono districts found in Buganda Kingdom central Uganda. The target VSLAs beneficiaries engaged are clustered into groups, are trained as a cluster, not individual. Those 5 VSLAs are attached to the national cooperative called CBS PEWOSA Cooperative, which has established a structure of encouraging savings and credit at the community level by clustering people who wish to get financing into units called "village savings and loan associations (VSLAs). And EBA-trainings conducted.

INTERVENTIONS

The overall interventions of ecosystem-based adaptation approaches (EBA) training of farmers, was conducted with in the 5 VSLAs supported by UNEP-EBAFOSA Uganda to develop climate action solutions.

- ▶ Establishment of VSLA cassava multiplication gardens; This work setup cassava gardens for village savings and loan association (VSLAs) anchored within the traditional structures of the Buganda Kingdom Cooperative known as the CBS-PEWOSA Cooperative to enable farmers access clean planting materials, disease and drought resistant cassava varieties. Cassava is the flagship crop for

UNEP-EBAFOSA Uganda work in Uganda. Each VSLA received cuttings to plant cassava in their land, this enabled them have 10 acres planted. The logic behind this model is that next planting season the VSLAs members are going to plant 1 acre of cassava on their individual farms using ecosystem-based adaptation natural solutions of intercropping their cassava with beans, maize and vegetables¹. This work also managed to support 10 individual farmers who planted cassava cuttings distributed by EBAFOSA Uganda with 30 acres of cassava plantation.

Beneficiary Category (VSLAs)	Previous cassava cutting distributed to VSLA in 2020	New established cassava materials planted in 2021	Number of beneficiaries	Acreage of cassava planted as per now	Expected acreage to be covered in 2022 by individual farmers members in VSLAs
Nsonaga Vsla	16 Bags	25 bags	30	7 acres	28 acres
Ggera Fortune VSLA	8 bags	16 bags	17	2 acres	8 acres
Sugu Women group		8 bags	30	1 acre	4 acres
Nakifuma Tweekembe Women Group Women group		8 bags	30	1 acre	4 acres
Mukama Mulungi VSLA		16 bags	30	2 acres	8 acres
Non VSLAs		80 bags	5	10 acres	40 acres
Total				23 acres	92 acres

Figure 2 Cassava cutting dissemination table in 2020 to 2021

- ▶ Introductions of drought and disease resistant varieties to the Village savings and loans association (VSLAs); Cassava production in the districts of Mukono, Buikwe and Luwero has been hit by hard by cassava brown stroke disease (CBD) and cassava mosaic disease (CMD). In response, this work distributed cassava resistant varieties of NAROCAS1 Variety. According to National Agriculture Research Organisation (NARO) the new varieties yield 3 times more than the local varieties which are planted by the VSLAs members. During our field survey for the VSLAs, we found out that farmers are still recycling local varieties which is affecting their production and income levels this is affecting foods security and nutrition. NAROCAS1 variety planted is not attacked by cassava mosaic disease or cassava brown stroke disease².

1 Ggera cassava multiplication garden; https://drive.google.com/drive/folders/1IYFqAx3JgSa4342lad_94MNjKTWT3i4?usp=sharing

2 Cassava disease resistant variety of NAROCAS1 Planted; https://drive.google.com/drive/folders/1WDtYgceOaQ4kpCoK2ZYQ_WD9eOEDnHRE?usp=sharing



Cassava Cuttings of NAROCAS1 ready to be distributed to the 5 VSLA supported by EBAFOSA Uganda



VSLA planting cassava cutting during in their mulipliation garden.



After Receiving the cassava stems of NAROCAS1 which are disease resistant now a farmer has a smile on their face

- ▶ Development of EBA Manual to guide extension work to enhance establish climate action for EBA; To meet the need of this training and work UNEP-EBAFOSA Uganda developed an Ecosystem Based Adaptation Manual for cassava growing in Uganda. This included modules on Sustainable production of cassava, cassava diseases, post-harvest handling, storage and marketing this EBA manual is to enable trainers and extension workers to enable proper training of cassava farmers to utilize the land sustainably without degrading the ecosystems systems. This manual is meant to help facilitators conduct trainings in the field.
- ▶ Capacity building of farmers in agronomic practices; Cassava grows well in over 80% of Uganda's arable land. Even though cassava is a durable crop in the farming system of Uganda. It has certain agronomic requirements and the crop must be managed. Planting material should be sourced from health and free disease resistant stems³.
- ▶ The following issues were covered at this regard in order for cassava farmers to increase their production and conduct sustainable agriculture.
 - ▶ Soils: cassava is grown in All soils BUT not water logged or rocky
 - ▶ Land preparation: Plough 2 times
 - ▶ Stem cutting length: 20-25 cm
 - ▶ 8 bags (each 500 stem cuttings) per Acre
 - ▶ Planting depth: 6-10 cm
 - ▶ Number of stems cutting per hole: 1
 - ▶ Spacing: 3m x 4m
 - ▶ Number of plants per acre: 4,000
 - ▶ Maturity period: 12 months
 - ▶ Field longevity: 2-3 years
 - ▶ Weeding regime: 3-4 times depending on weed type
 - ▶ Stem yield (1st Crop): 40-60 bags

- Stem yield (Ratoon crop): 100-150 bags
 - Tuber yield: 25-45 Tons/Ha depending on variety
 - Intercrop with beans or maize: 1 month after cassava has germinated
- ▶ Identify and distribute CBSD and CMD resistant/tolerant cassava variety of NAROCAS1; Cassava brown streak disease (CBSD) is caused by Cassava brown streak virus (CBSV) (genus Ipomovirus, family Potyviridae). The disease affects the yield and quality of the tuberous roots of cassava. During our field survey we observed the existence of CBSD in most of the cassava gardens of the communities and members we are supporting. Symptoms of CBSD observed include; infected cassava was yellow vein banding, expressed mainly on the lower, older leaves. cassava mosaic disease was observed in the gardens, in addition, the African cassava mosaic disease (CMD) pandemic devastated Uganda's cassava production between 1992 and 1997, causing losses valued in excess of US\$60 million annually (Legg & Cuellar, 2017). The chlorosis occurred mainly along the secondary and tertiary veins. Furthermore, the VSLAs of Nsonga VSLA farmer's gardens in Buikwe district their cassava had symptoms of Cassava Mosaic disease. We conducted an awareness training to educated farmers to fight this disease by conducting the following;
- Farmers were advised to uproot and burn cassava stems which are affected with the disease
 - Conduct crop rotation where the affected gardens of cassava existed farmers were advised to plant maize, beans because the whitefly spread the virus.
 - Avoid mixing cassava varieties of cassava in one plot of garden.
 - Planting of resistant or tolerant varieties like NAROCAS1
 - Distribute only stems and fields inspected and authorised by Agricultural officer.
 - Don not move planting materials from areas where the disease is most common to other places
 - Uproot and discard diseased cassava plants this helps in reducing the source of the disease.
 - Use of disease-free planting materials.



Ms Alibakiriza Racheal of Ggera Fortune Women group holding a cassava brown stoke diseased cassava plant on his garden. This disease was identified on the farms



Yellow greenish Mosaics with in the garden leaf affected by virus . Cassava Moasic disease was identified on the farm



Ms Alibakiriza Racheal holding deformed cassava roots behind bushy cassava garden

- ▶ Intercropping and crop rotation; during the training farmers were encouraged to plant quick maturing crops in the cassava garden after one month of planting the stems. Farmers planted beans in the cassava plantation. Nsonga VSLA harvested 1 tonne of beans, this was intercropped with cassava in addition Ggera Fortune women group managed to plant beans in one and half acres and harvested 250 kilograms⁴.

“Last season we were trained by EBAFOSA Uganda, about intercropping, as a group we managed to intercrop cassava with beans on two acres. The rains were good and we harvested at least 450 kilograms of beans, which each kilogram was sold 2,500 UGX and we earned 1,125,000 UGX. The profit was used to buy new beans varieties of NARO BEANS 1 and also hired land to plant cassava”.
Nolla Nakamatte Cassava garden committee coordinator



Figure 3 Nsonga VSLA members planted beans with new cassava cuttings of NAROCASI in the new block

- ▶ Establishing post-harvest handling trainings to the VSLAs⁵. Farmers were trained on how to add value to cassava and vegetables grown using natural based solutions of ecosystems-based adaptation approaches. This work conducted a feasibility study which that farmers harvest was decaying in the gardens. Sugu Agalyawamu Women group and Mukama Mulungi VSLA respectively received value addition training on cassava and vegetables planted organically, using animal waste as manure.
- ▶ Gender mainstreaming in EBA Training, Gender and agriculture are intimately linked as women and men have unique relationships with, dependencies on, and expertise regarding their agriculture. Gender roles, responsibilities and expectations therefore shape all forms of human relationships to

4 Farmers sowing beans intercropped in cassava gardens; <https://drive.google.com/drive/folders/18yCJBwvmfpJn5-BzTWY43kFTO2SCcUem?usp=sharing>

5 Nakifuma VSLA adding value on cassava; https://drive.google.com/drive/folders/1rZieXo00Ahm_f9LS06KWwXph03ZJU-39?usp=sharing

the agricultural system, and the involvement, contribution and role of both men and women, are of paramount importance to the functioning and wellbeing of natural resource dependent communities, although often not well understood. This work enhanced skills of women to lead in applying and promoting Ecosystem based adaptation natural based solution to enable sustainable agriculture. Committees were established in the 5 Village savings and Loans association to head EBA approaches in the group as well as ensure solar dryer value addition to curtail postharvest losses of EBA farmed cassava. All these committees were headed by women. In total, up to 83% of beneficiaries were women⁶.

VILLAGE SAVINGS AND LOAN ASSOCIATION TRAINED	MALE	FEMALE	TOTAL
Sugu Agalyawamu women group	4	26	30
Mukama Mulungi VSLA	10	20	30
Nakifuma Tweekembe Women Group	2	29	31
Ggera Fortune Women group	3	14	17
Nsonga VSLA	5	25	30
Total	24	114	138

Table 1 showing number of female and male who received the EBA-Training

- ▶ Linking VSLAs to savings cooperatives, this work enabled VSLAs trained in EBA to work and receive finance literacy training from CBS-PEWOSA Cooperative, this cooperative was established under the Buganda Kingdom structures and guidance, CBS-PEWOSA Cooperative is the most reputable cooperative in Uganda and this work made sure we leverage on their existence in Uganda to train finance education, savings and group dynamics. CBS-PEWOSA Cooperative offers Village savings and Loans association a variety of products ranging from savings and affordable credit services, fixed deposits, money transfers, agriculture advisory services and a range of digital financial services⁷. This work leveraged on the existence of CBS-PEWOSA Cooperative by training VSLAs to save their money with reputable cooperative after selling their agriculture produce. A total of 5VSLAs constituting a total of 138 members received this training.
- ▶ Involving local communities: Adaptation measures can be more successful when the local population participates in both planning and implementation. Co-operation was used during training because all member of the VSLAs got involved and suggested which measures they can practice in their farm for example intercropping, mulching, digging trenches on their personal gardens.

6 List of VSLAs members; <https://drive.google.com/drive/folders/1XsJXmysATG4nUqwG0mldBfl4vpGI-Teu?usp=sharing>
7 CBS-PEWOSA Cooperative; <https://cbspewosacoop.com/>

- ▶ Therefore, community VSLAs participation is critical for successful interventions aimed at promoting adaptation and enhancing resilience to climate change. The multiplication gardens established by this work are acting as community learning centre for ecosystem-based adaptation practices and involved the local cultural and political, opinion leaders to participation. This helps to foster acceptability of the interventions.

IMPACTS OF THE EBA-TRAINING



Figure 4 Nsonga VSLA chairperson Abdulatif Wanyale training fellow group members the different varieties of cassava and beans. Photo; EBAFOSA Uganda

- ▶ Increasing access to savings, loans, and other sources of credit: Village Savings and Loans Associations (VSLAs) for example Nsonga VSLA managed to plant beans intercropped with cassava, they harvest the beans after 60 days and got 160kilgrams of beans, they sold using good season at 2,500UGX per kg. and earned UGX 400,000. They managed to save, hire another piece of land 5 acres to plant cassava cutting of NAROCAS1 Variety given to them by EBAFOSA Uganda⁸. This has expanded land under EBA by 7 acres in addition. It also enabled members have confidence in the VSLAs because they have income generating activities.

8 EBA Training on cassava multiplication block; <https://drive.google.com/file/d/1OwhiNpQ095AmmwSNSIzOn1ohGED7j0N6/view?usp=sharing>

- ▶ Increased availability of clean planting materials resistant to Cassava Mosaic Disease (CMD) and tolerant to cassava brown stoke disease in the village savings and loans association, this work has enables dissemination of knowledge of identifying diseased cassava stems, clean cassava plantation and high yielding varieties due to the training conducted in the VSLAs⁹. Farmers now are knowledgeable of diseases affecting cassava in their community¹⁰.
- ▶ Increased knowledge in identifying and selecting improved cassava disease free varieties by farmers. Farmers got to understand the existing cassava diseases affecting cassava in their community. The beneficiaries farmers were sensitized on which disease attack cassava, were to get certified cassava cuttings, types of varieties, The majority of beneficiaries can now recognize disease symptoms and know what to do if they see them in their fields – principally removing diseased plants, burning cassava diseased stems, conducting crop rotation, avoiding mixing of local and improved clean varieties in one garden, change of crops planted in the garden also helps to fight the whitefly which spread virus which cause CBS and CMD.

“We have been planting different varieties of diseased cassava cutting in one same plot, in my village no one was seeing this action, my cassava leaves are yellowish in colour, cassava roots rot in the garden even the animals can’t eat the decayed roots. but today we have received a training from EBAFOSA Uganda, were now I can differentiate diseased cassava plantations and solutions to prevent those diseases.” Nabulime Catherine cassava farmer.

- ▶ Multiplication gardens established: cassava multiplication plots were established in the VSLAs gardens to enable their members access clean cassava cuttings for each member. Farms were established because this method is cheaper than establishing larger sites. Those farms act as centre of awareness and distribution of cassava cutting to their personal farms to enhance food, income and nutrition security. This enables Traceability of the planting material; cassava planting given to VSLAs enabled traceability of the cassava materials¹¹.
- ▶ Access to agriculture Inputs. This work supported VSLAs with cassava planting materials and agronomic practices¹² Farmers in the 5 VSLAs have planted cassava cutting of NAROCAS1 not less than one acre of cassava. Nsonga VSLA received cassava cutting of 5 acres and previously they had planted 2 acres, Ggera Fortune women group plant two acres in addition of the one acre, Mukama Mulungi VSLA planted 2 acres, Sugu Agalyawamu women group and Nakifuma Tweekembe Women Group VSLA both planted one acre each. Those gardens act as multiplication sites for the VSLAs members and all the 30 members per VSLA are required to grow at least one acre of cassava and other non VSLAs members were given cassava cuttings to plant¹³.
- ▶ Access to market of cassava planted by the women groups using ecosystem-based adaptation approaches. Cassava planted using EBA approaches and dried hygienically using solar dryers has

9 EBA-Training testimony from beneficiaries; <https://drive.google.com/file/d/1FFqrjdB5SrGvq0UpLjC8faYnON1AU00/view?usp=sharing>

10 EBA-Training for cassava farmers and testimonies; <https://drive.google.com/drive/folders/1B0VAfiw41QGrWr0dXcNe326rc5jC8Qkh?usp=sharing>

11 https://drive.google.com/file/d/1hi4d2_XGXvpdtSIAZA1Up2ORXn8M3OST/view?usp=sharing

12 David Luganda explaining the EBAFOSA Logic of EBA; https://drive.google.com/file/d/1TXE5H5YfyUQ_zWgVlw7ts6IHFe7Ey17P/view?usp=sharing

13 <https://drive.google.com/drive/folders/1e0tLYXljVZgSrbRfCdZjdGx3DdsJs4wM?usp=sharing>

been earmarked by cassava flour processors who are a market for this cassava. This cassava that is grown using EBA and dried using solar dryers follows provisions of the Uganda National Bureau of Standards (UNBS) and this enhances its marketability. Up to 7 tonnes worth UGX 1,400,000 are already earmarked for uptake by a processor.

Food and income security. This work aims to promote climate action enterprises which enable cassava farmers increase their production to produce more cassava and save more money with CBS-PEWOSA Cooperative. Furthermore, this work also enhances for food security at home for households. Cassava is one of the crops. The beans intercropped in the cassava garden avail food for homes and for selling¹⁴.

- ▶ Cassava value chain with focus on production, processing/ value addition and production of high cassava flour for bakery usage. This work guided the 5 Village savings and loans association who had been trained in EBA production of cassava to access communal climate action solution of solar dryer which facilitates the dehydration of cassava chips to moisture content of below 12% moisture content, and cut postharvest losses.

Cassava multiplication garden committee established, this work has managed to show ownership of the program to VSLA members, however, a committee was established by the VSLA members to take care of the cassava garden established by the group, the cassava cutting planted were provided by EBFOSA Uganda to enable and strengthen cassava seed system distribution. Empowering farmers is one of the candle goals of this work by Improving access to financial services and agricultural inputs, decision-making power, control over income, time burdens, and membership in groups, VSLA members managing the EBA-cassava garden¹⁵. A total of 23 acres of multiplication sites cultivated using EBA were established to supply planting material to a total of 93 acres and benefit up to 138 farmers in the coming season. All this will expand coverage of EBA among agro-value chain actors and enhance demand-driven upscaling.

“Before the EBAFOSA Uganda Programme it was a bit difficult for me to lead any group of individuals in my village even at home my husband was making decisions and solving problems, but now members have seen my strength of leadership because I have coordinated my team and the whole garden was weeded on time.” – Annette Nambuya chairperson committee of the cassava garden Nsonga VSLA.

- ▶ Improved crop performance even under moisture distress; the NAROCAS1 drought resistant cassava grown using EBA approaches was observed as having green leaves and looking more vibrant compared to the cassava of neighbouring gardens¹⁶. It was also free from brown stalk diseases compared to the neighbouring cassava which had yellow leaves one of the symptoms of brown stalk disease and mosaic disease.
- ▶ Sustainability of EBA Practices in VSLAs; this work has enabled the 5 VSLAs centres to establish cassava multiplication gardens to benefit the group members. VSLAs are to continue promoting this innovative logic even if EBAFOSA is not available. Because income generating activities are established for the VSLAs where they are co-operating around the solution of EBA-Cassava Garden.

14 Farmers trained EBA-Practices; https://drive.google.com/drive/folders/1WDtYgceOaQ4kpCoK2ZYQ_WD9eOEDnHRE?usp=sharing

15 https://drive.google.com/file/d/1O-epP_yPyuahicKNf0WPDUTRACj8iZxn/view?usp=sharing

16 David Luganda conducting EBA Training <https://drive.google.com/file/d/1zTgpi0rGMMMtO7im7CpfdRKipGhF0Gec/view?usp=sharing>

- ▶ Improved decision making by women to take up ecosystems-based adaptation approaches; decision-making in regards to production activities. Generally, women had low involvement in decision-making activities about taking up natural solutions of EBA- Approaches, production because of the local tradition that recognizes men as figureheads and principal decision maker in this logic. Women are freely participating in the activities and on other issues and matters that affect them.
- ▶ Increase in the Village savings and Loans association capital and incomes from the income generating activities they conduct of Co-operating around the solution of EBA-Cassava Garden in the communities and intercropping beans with cassava NAROCAS1 Variety¹⁷. Many village savings and loans associations in the communities we are working meet weekly to collect money and save without their management asking members where they earn the money they save. EBAFOSA is promoting climate action enterprises for VSLAs to generating income for saving and this is promoting trust, confidence and sustainability of the VSLAs.
- ▶ Distribution of cassava cuttings to members of the VSLA and community, this work has managed to create a relationship in the community since farmers have come to the farm to learn and ask the variety of cassava the VSLA planted because its disease resistant and look health compared to the cassava in the community. We expect to distributed half and acre to the 30 members of Nsonga VSLA because this cassava will be sources from their multiplication garden¹⁸. The other new block of 5 acres is meant for the new field and VSLAs EBAFOSA is reaching.

CONCLUSION

Figure 5 Summary of the inventions and impacts

Interventions	Impacts
Establishment of VSLA cassava multiplication gardens	<i>Multiplication gardens established</i> Distribution of cassava cuttings to members of the VSLA and community Access to agriculture Inputs
Introductions of drought and disease resistant varieties to the Village savings and loans association (VSLAs);	<i>Increased knowledge in identifying and selecting improved cassava disease free varieties by farmers</i>
Development of EBA Manual to guide extension work to enhance establish climate action for EBA	<i>Improved crop performance even under moisture distress</i>
Capacity building of farmers in agronomic practices	Improved decision making by women to take up ecosystems-based adaptation approaches. Sustainability of EBA Practices in VSLAs.

17 https://drive.google.com/file/d/1s1bgIjDObdIb935-E_zzRhuRXLwTqmak/view?usp=sharing

18 Members of the VSLA to share the cassava cuttings; https://drive.google.com/file/d/1n8VoHqTf8qH6qOtT1hky-TgeZh_AoSID/view?usp=sharing

Interventions	Impacts
Identify and distribute CBDSD and CMD resistant/ tolerant cassava variety of NAROCAS1;	Improved crop performance even under moisture distress
Intercropping and crop rotation	<i>Food and income security</i> Sustainability of EBA Practices in VSLAs
Establishing post-harvest handling trainings to the VSLAs	<i>Cassava value chain with focus on production, processing/ value addition and production</i>
Gender mainstreaming in EBA Training	<i>Cassava multiplication garden committee established led by women.</i>
Linking VSLAs to savings cooperatives	<i>Increase in the Village savings and Loans association capital and incomes from the income generating activities</i>
Involving local communities	Increased knowledge in identifying and selecting improved cassava disease free varieties by farmers

NEXT STEP

- ▶ *Lessons in applying EBA as part of the UNBS climate action market incentives guideline to achieve national standards of the UNBS will be expanded in Buganda kingdom and other areas beyond Buganda region because UNBS is a national bureau of standards.*
- ▶ Expansion of the multiplication of CBDSD tolerant varieties to cover more cassava growing districts.
- ▶ *Strengthening of ecosystem-based adaptation committees for different VSLAs to enhance cooperatives driven financing of EBA.*
- ▶ *Enabling farmers to start planting other crops like pumpkins mainly for value addition.*
- ▶ *Post harvesting handling technology training in the 5 Village savings and loans association.*

REFERENCES

- Legg, J. P., & Cuellar, W. (2017). *East African Cassava Mosaic Virus Plant Virus Diseases : Economic Aspects Control of Plant Virus Diseases Economic Significance of Satellites.*
- Lipper, L., Thornton, P., Campbell, B. M., Baedeker, T., Braimoh, A., Bwalya, M., Caron, P., Cattaneo, A., Garrity, D., Henry, K., Hottle, R., Jackson, L., Jarvis, A., Kossam, F., Mann, W., McCarthy, N., Meybeck, A., Neufeldt, H., Remington, T., ... Torquebiau, E. F. (2014). Climate-smart agriculture for food security. *Nature Climate Change*, 4(12), 1068–1072. <https://doi.org/10.1038/nclimate2437>
- MWE. (2015). *Ministry of Water and Environment U Ganda ' S I Ntended N Ationally D Etermined C Ontribution (Indc)* (Issue October).
- Seddon, N., Reid, H., Barrow, E., Hicks, C., Hou-Jones, X., Kapos, V., Rizvi, A. R., Roe, D., Ali, U.-W., & Rizvi, R. (2016). Ecosystem-based approaches to adaptation: strengthening the evidence and informing policy Research overview and overarching questions. In *International Institute for Environmental and Development: Vol. Retrieved.* www.iied.org

APPENDICES

EBA-Training for cassava farmers and testimonies - google drive links.

https://drive.google.com/drive/folders/15sKbE6DqC5HRjkOOohUCgY8fs_pn6Skw?usp=sharing

<https://drive.google.com/drive/folders/1R8hbK1QzVttWN-JBn67tE3osn2v8ApZf?usp=sharing>

https://drive.google.com/file/d/11r1eCy_WnrWBdAUH-irRnXL9rYRqVz8b/view?usp=sharing

https://drive.google.com/drive/folders/1lYFqAx3jSgSa4342lad_94MNjKTWT3i4?usp=sharing

<https://drive.google.com/drive/folders/1B0VAfiw41QGrWr0dXcNe326rc5jC8Qkh?usp=sharing>

https://drive.google.com/drive/folders/1WDtYgceOaQ4kpCoK2ZYQ_WD9eOEDnHRE?usp=sharing

https://drive.google.com/file/d/1TXE5H5YfYUQ_zWgVlw7ts6IHFe7Ey17P/view?usp=sharing

APPENDIX

List of VSLAs trained EBA – Approaches

<https://drive.google.com/drive/folders/1XsJXmysATG4nUqwG0mldBfl4vpGI-Teu?usp=sharing>



info@ebafosa.org



P.O Box 30552 00100
Nairobi
Kenya

WWW.EBAFOSA.ORG