



## Strengthening community seed banks in East and Southern Africa in times of Covid-19

**Photo 1:** Members of the Kamathatha community seed bank, Kenya, receive cassava planting material from the Seed Savers Network-Kenya.

**Credit:** The Alliance of Biodiversity International and CIAT/R.Vernooy

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This brief presents highlights of the work done in 2020 in East and Southern Africa to strengthen community seed banks and foster the collaboration between them, and with the national genebank of each country. Covid-19 made traveling and face-to-face interaction nearly impossible during the year, but activities were not halted altogether. Based on seed survey data obtained by national partners during the outbreak, Covid-19 negatively affected the seed systems in the region. In Kenya, 93% of the surveyed farmers reported that it had become more difficult to obtain seed; in Uganda 69%; in Zimbabwe 98%. Production levels decreased everywhere while prices went up and due to mobility restrictions, it became much more difficult to sell and exchange seed. In all 3 countries, surveyed farmers responded that one strategy to deal with the situation, was to obtain seed from the community seed bank.



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### Protocol for the collaboration between the national genebank and the community seed banks

In recent years, national genebanks of some countries (e.g. Bhutan, Mexico, Nepal, South Africa and Uganda) have started to collaborate with community seed banks on the important task of conservation of crop (and tree) varieties. This collaboration has taken place in informal ways, in the form of participation in meetings and gatherings,

seed and food fairs and through a number of joint activities, including the establishment of community seed banks and related (capacity development) activities. As far as is known, no formal agreements have been made/signed to structure, monitor and evaluate the collaboration in a more rigorous manner.

Based on interactions among professionals from various countries who support community seed banks, it was decided to develop a generic collaboration protocol that could help shape the collaboration process in

countries where this has not yet taken place or to solidify the process in countries where this is already happening.

The protocol document includes chapters (articles) on the roles of the national genebank; the roles of community seed banks; principles of collaboration; activities that can be done together and rules and regulations for the collaboration. It benefitted from the inputs of many partners in Kenya, South Africa, Uganda and Zimbabwe and from the long community seed bank working experience of staff of Bioversity International, now the Alliance of Bioversity International and CIAT. It should be seen as a work in progress. The protocol will be available soon.

## Kenya

During 2020, the COVID-19 pandemic disrupted the movement of seed in the country and in the larger region. Distribution channels of seed companies were challenged and purchasing power of farmers was reduced. Trade between countries and regions was also affected as mobility of goods was hindered due to lockdowns to contain the disease. The pandemic exposed Kenya's high reliance on imported maize seed. Local seed systems turned out to be more robust and continued to secure the supply of food and seed, for example, through the production and sale of local maize varieties. Farmers of the Seed Savers Network were able to meet their seed requirements and even served their neighbors in the villages.

Through a collaborative initiative, 4 organizations joined forces to advance the community seed bank work in the country, including the Seed Savers Network – Kenya, as the lead organization, the National Genetic Resource Institute



Photo 1: Members of the Seed Savers Network are trained in germplasm gap analysis.  
Credit: Seed Savers Network-Kenya

(GeRRI, which houses the national genebank), the Sustainable Agriculture Development Initiative (SADI) of SANREM and the Sustainable Organic Farming and Development Initiatives (SOFDI). Other organizations joined some of the activities carried out. Action Aid took part in various trainings, inviting 45 farmers from northern Kenya. As a follow-up, these farmers established 3 new community seed banks. Other organizations taking part in the trainings included the Grow Bio Intensive Agriculture Center of Kenya (GBIAK), the Community Sustainable Development Empowerment Programme (COSDEP), and the Community Sustainable Agriculture and Healthy Environment Program (CSHEP). All three committed to implement new community seed banking activities.

The aim was to address the following challenges: actors working in this area are not coordinated and the support of the government is limited; farmers in the different seed banks do not have the means to learn from their counterparts in other regions to improve

their knowledge and practices; and, there is weak collaboration between the government (e.g. the national genebank) and non-governmental organizations that support community seed banking. This has been slowing down the pace and restricting the space for the promotion of farmers' seed systems in Kenya.

The fruitful collaboration has allowed the Kenyan partners to accelerate community seed banking in their respective farming communities and to begin a process of scaling toward a national conservation system. A good working relationship with the government agencies was key for the success. This was realized through learning journeys by farmers to the national genebank, the development of a policy brief on the role of county governments in supporting community seed banks (Box 1), the development of a community seed bank establishment guideline and training on germplasm gap analysis for the farmer communities (photo 1). The government institutions provided technical backstopping for these activities, which was very effective.

## Box 1: Policy support for community seed banks: the role of county governments, Kenya

Partners, led by the National genebank, carried out a study to analyze the current seed policy and law on gaps and weaknesses concerning the roles and contributions of smallholder farmers to the national seed sector, and opportunities for the local/county governments to support farmers and their seed saving efforts. Findings are presented in the brief 'Enhancing recognition and support for community seed-banks in Kenya: The role of County Governments.' The document was shared with the 4 county governments of Nakuru, Kisumu, Vihiga and Bungoma, where partners work (photo 7 on page 6). The policy brief can be found on the website of the Seed Savers Network-Kenya: <https://seedsaverskenya.org/wp-content/uploads/2021/01/Policy-Brief-final.pdf>.

The germplasm gap analysis carried out in 6 counties revealed that farming communities continue to lose local crop and varietal diversity at a high rate. Farmers identified almost 20 lost varieties of various crops and another 30 on the verge of disappearing. The analysis serves as an incentive to strengthen the efforts of all the organizations involved in the initiative and deepen the collaboration. One of the collaborative highlights was the requisition of 40 varieties of local vegetables (Ethiopian kales, amaranths and jute mallow) from the national genebank by farmers. More than 100 farmers were trained in seed multiplication, which led to considerable increases of the seed stock in community seed banks. This pilot was very effective to familiarize farmers with the process of obtaining seed from the national genebank, which has increased awareness of the institution and its role in reintroduction of lost local varieties in different regions.

## Uganda

Based on experiences of establishing community seed banks in Uganda and using the 3 community seed bank handbooks for farmers' by Ronnie Vernooy and colleagues, a draft guideline referred to as the standard operating procedure (SOP) for establishing a community seed bank was developed. The SOP has 17 sections, ranging from What is a community seed bank? to What activities can a community seed bank carry out to make progress? It is a valuable document, that will augment and enhance the capacity of farmers and farmer groups to set up their own community seedbank in an orderly way, as encouraged by the National Seed Policy 2018 (photo 2).

A second, related activity was the development of a national database of community seed banks, with the support of the Plant Genetic Resources Centre under the National Agricultural Research Organisation (NARO). The objectives of the database are: (i) to keep track of the available seed in the community seed

banks; (ii) capture information about the work of community seed banks and provide feedback to them; (iii) store information of community seed banks and generate statistical information regarding the available diversity of crops and varieties. Data of eight community seed banks has been collected: Kiziba community seedbank (KCSB); Rubaya community seedbank

(RCSB); Nakaseke community seedbank (NCSB); Hoima community seedbank (HOCOSEB); Nakasongola community seedbank; Soroti community seedbank; Iganga community seedbank; and Joy & family demonstration farm. A website for the database has been developed and will soon be launched.



Photo 2: Farmers meet to discuss the establishment of a new community seed bank. Credit: NARO/J. Adokorach

## Box 2: Seed celebration in Hoima

The Hoima community seed bank hosted the launch of a new bean and finger millet seed catalogue on 3 March 2021, which was organized as part of a seed exhibition to promote varieties that are well adapted to climate change (photo 3). The theme for the day was “Increasing production, improving quality and establishing markets for beans and finger millet for smallholder farmers in Hoima.” The event aimed to create awareness about the need to make sure that every seed counts. Farmers were introduced to the characteristics of these varieties, which can be found in the seed catalogue, and which are stored in the Hoima community seed bank. Characteristics include information about their agronomic attributes and nutritional benefits. The event further fostered the exchange of seed between farmers from different regions in Uganda, and thus acted as an avenue for disseminating good quality, high performing and climate-resilient crops and varieties. The Hoima community seed bank has a business wing, is registered as a seed cooperative and therefore can legally participate in commercial production of quality declared seeds or QDS. The event, together with partners from Uganda’s seed certification body, introduced farmers to the required procedure they can follow to produce QDS.



**Photo 3:** Visitors observe seed diversity during the seed exhibition in Hoima, Uganda. **Credit:** The Alliance of Bioversity International and CIAT/T. Recha

To read more about the event in Hoima: Otieno, G. and Recha, T. (2021) Upscaling climate smart and nutrition sensitive beans and finger millet in Uganda. Blog. The Alliance of Bioversity International and CIAT. [https://alliancebioversityciat.org/news\\_and\\_blogs/upscaling-climate-smart-and-nutrition-sensitive-beans-and-finger-millet-in-uganda/](https://alliancebioversityciat.org/news_and_blogs/upscaling-climate-smart-and-nutrition-sensitive-beans-and-finger-millet-in-uganda/).

For a glance of the event, see the video: <https://youtu.be/AFohByRxVP8>.

The seed catalogue can be found here:

Otieno, G., Recha, T., Fadda, C., Mulumba, J., Adokorach, J., Ahumuza, J., Kakeeto, R., Kairagura, G. (2020) Enhancing access to genetic resources for climate change adaptation in Kenya, Uganda and Tanzania: Seed catalogue of best performing varieties of beans and finger millet in Hoima Uganda. Rome (Italy): Bioversity International. <https://cgspace.cgiar.org/handle/10568/111212>.

## Zambia

Farmers in Zambia from time immemorial have been saving seed, and this practice has been passed on from generation to generation. Farmers save seed in dried calabashes or clay pots. Although there have been initiatives and programmes to promote on-farm conservation and use of local crop diversity in Zambia, these have fallen short of establishing functional community seed banks. In the recent past, Civil Society Organizations in the country have championed the concept of community seed bank to support

farmers’ traditional conservation practices. A community seed bank can enhance the resilience of farmers by securing access to, and availability of diverse, locally-adapted crops and varieties.

As a pilot experience, the national genebank and Zambia Agriculture Research Institute (ZARI), with the support of Community Technology Development Trust (CTDT), constructed a new community seed bank in Lusitu (located in the Gwembe valley) and conducted three farmer trainings on establishing and managing a community seed bank (photos



**Photo 4-5:** The new Lusitu community seed bank under construction. **Credit:** ZARI



Photo 6: Part of the seed collection of the Chimukoko community seed bank. Credit: The Alliance of Bioversity International and CIAT/R. Vernooy

4 and 5). It is expected that this community seed bank, the national genebank and ZARI will further expand their collaboration. The experiences from other countries in the establishment and management of community seed banks, and the promotion of farmers' seed enterprises, will serve as a lesson for Zambia to build the necessary capacities required.

## Zimbabwe

Community Technology Development Trust (CTDT) continued to work on resilient seed systems for climate change adaptation and sustainable livelihoods, technical capacity building and training, exploring opportunities for registration of farmer seed and supporting the formulation of enabling policies for smallholder farmer seed systems. An important intervention concerns the support for community seed banking. As centers for sustainable use of local germplasm, community seed bank activities include on-farm characterization of crop

diversity and dissemination of related local knowledge, promoting indigenous ecological practices and carrying out field trials to produce "evidence-based" results. Community seed banks in the country are instrumental in distributing climate-adaptive crop cultivars to farming communities in most of the project areas and beyond (photo 6). Both the research on and the distribution of cultivars, facilitates increased utilization, value-addition and the creation of market linkages for preferred food crops.

To maintain healthy and viable seed collections in the community seed banks, CTDT carried out seed health testing of germplasm. This was necessitated by the fact that crops are frequently infected with a range of seed-borne or systemic pathogens that may not be visible or easily recognized during seed collection and storage. Seed-borne or systemic inoculums may reduce longevity during storage and cause poor germination or field establishment. Exchange of

infected seeds or planting materials may result in the spread of pests and diseases into new regions; hence, community seed banks should ensure that seed or planting materials conserved, are free from seed-borne or systemic diseases and pests to the highest degree possible.

CTDT established an on-line seed portal to facilitate linkages between all the community seed banks in Zimbabwe, with a server located at its head office. The main objective of this activity is to maintain an on-line data base for the germplasm collections in different community seed banks. Each community seed bank has GPS coordinates, which help locate it. The portal is administered by CTDT, which has the credential to log in to the portal, but at the same time allowing the farmers, government, CTDT extension staff and the national genebank to create their accounts. In this way, everyone can check what farmers in similar agro-ecological regions have deposited and access seed upon request.

## Other news

The community seed bank handbook for farmers (see below) was translated to Ateso and Luo, two of Uganda's national languages.

The community seed handbook for farmers has been updated and is now available:

Vernooy, R., Bessette, G., Sthapit, B. Gupta, A. (2020) How to develop and manage your own community seed bank: Farmers' handbook (updated version). Technical issues: Booklet 2 of 3. Bioversity International, Rome, Italy. <https://hdl.handle.net/10568/92001>.

Vernooy, R., Bessette, G., Sthapit, B., Porcuna Ferrer, A. (2020) How to develop and manage your own community seed bank: Farmers' handbook (updated version). Management, networking, policies and a final checklist: Booklet 3 of 3. Bioversity International, Rome, Italy. <https://hdl.handle.net/10568/92002>.

Vernooy, R., Sthapit, B. and Bessette, G. (2020) Community seed banks: concept and practice. Facilitator handbook (updated version). Rome (Italy): Bioversity International; Department of Agriculture, Forestry and Fisheries, Pretoria. Available: <https://cgspace.cgiar.org/handle/10568/81286>.

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**Photo 7:** The Seed Savers Network hands the community seed bank policy brief to Mr. Fredrick Owino, Nakuru County government Director of Agriculture. **Credit:** Seed Savers Network-Kenya