



DIVERSIFOOD

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- ☐ **CO:** Confidential, only for members of the consortium (including the Commission Services)
- ☐ **CI:** Classified, as referred to in Commission Decision 2001/844/EC



Abstract

Regine Andersen, Pitambar Shrestha, Gloria Otieno, Yoshiaki Nishikawa, Patrick Kasasa and Andrew Mushita.

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The number of community seed banks is rapidly increasing, in response to the growing demand for greater diversity of crop genetic resources among farmers and gardeners around the world. Two major studies shed light on this development, enabling a closer look at the differing approaches, methods, outreach and achievements. These studies were presented and illustrated with examples at a side-event at the Seventh Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty) in Kigali, Rwanda, in 2017, aimed at sharing experiences. This report presents the contents of the side-event as well as key decisions from the Governing Body Session of relevance for community seed banks.



COMMUNITY SEED BANKS: SHARING EXPERIENCES FROM NORTH AND SOUTH

REPORT

FROM A SIDE EVENT HELD
1 NOVEMBER 2017,
DURING THE SEVENTH
SESSION OF THE
GOVERNING BODY OF
THE INTERNATIONAL TREATY
ON PLANT GENETIC
RESOURCES FOR FOOD
AND AGRICULTURE
IN KIGALI, RWANDA

Regine Andersen, Pitambar
Shrestha, Gloria Otieno, Yoshiaki
Nishikawa, Patrick Kasasa and
Andrew Mushita



SUMMARY

The number of community seed banks is rapidly increasing, in response to the growing demand for greater diversity of crop genetic resources among farmers and gardeners around the world. Two major studies shed light on this development, enabling a closer look at the differing approaches, methods, outreach and achievements. These studies were presented and illustrated with examples at a side-event at the Seventh Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty) in Kigali, Rwanda, in 2017, aimed at sharing experiences. This report presents the contents of the side-event as well as key decisions from the Governing Body Session of relevance for community seed banks.

The first community seed banks were established in the 1970s in the Global North and Australia, mainly in the form of seed-saver networks, later in various organizational forms. They evolved as grassroots initiatives from networks or organizations of farmers or gardeners. In the Global South, community seed banks emerged in the late 1980s, established with the support of international and national NGOs. Since 2000, their numbers have been increasing rapidly. Community seed banks contribute importantly to the global genetic heritage by conserving and making available an impressive range of crop varieties and populations that may else have been lost.

Traditionally, the main objective of a seed bank has been to save and exchange local seeds. However, today's community seed banks vary: some are most concerned with conservation; others with seed multiplication, access and availability; whereas others focus on seed/ food sovereignty and aware-

ness-raising. In several countries, education and training are among the key activities, often focused on crop improvement and participatory plant breeding. Collaboration with plant breeders and scientists is becoming more frequent.

Key elements in ensuring sustainability for community seed banks include capacity development to ensure management quality; self-financing systems to reduce dependence on external funding; enabling legal and political framework conditions to ensure sufficient legal space and political support; enabling social structures among those involved; satisfactory physical infrastructure; and systematic planning processes with effective operational mechanisms.

The findings were illustrated with examples from Japan, Uganda, Zimbabwe and Nepal, highlighting the rich diversity of community seed banks globally, and of the crop genetic resources they maintain.

Resolutions adopted at the Seventh Session of the Governing Body of the Plant Treaty mark the increasing awareness among the Contracting Parties of the value and importance of community seed banks in fulfilling the objectives of the Plant Treaty on the conservation and sustainable use of crop genetic diversity for food security. The Governing Body invites the countries that are Contracting Parties to promote sustainable biodiverse production systems and facilitate participatory approaches such as community seed banks, along with a range of other supportive measures. A central question is how these resolutions will be followed up in practice among the Contracting Parties. The report ends by highlighting how DIVERSIFOOD follows up on this question.

ACKNOWLEDGEMENTS

The side-event on which this report is based was initiated by the Fridtjof Nansen Institute, Norway, on behalf of the European Union Horizon 2020 project *Embedding crop diversity and networking for local high-quality food systems* (DIVERSIFOOD). It was conducted in collaboration with Bioversity International and Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Nepal.

The side-event received financial support from the European Union's Horizon 2020 research and innovation programme under grant agreement No 633571, through DIVERSIFOOD, as well as from the project *Strengthening National Capacities to implement the International Treaty on Plant Genetic Resources for Food and Agriculture* (ITPGRFA), funded by the Directorate-General for International Cooperation, Ministry of Foreign Affairs, the Netherlands. Additional technical support was provided by the *CGIAR Research Programme on Climate Change, Agriculture and Food Security* (CCAFS). The contributions of four of the panel participants were made possible thanks to travel support from the Development Fund of Norway, Oxfam Novib of the Netherlands and Japan Society for the Promotion of Science (grant number 17H04627). Thanks are also due to Ronnie Vernooij and Evelyn Clancy of Bioversity International for their assistance with the side-event and input to this report.

Finally, we wish to acknowledge the many people behind the community seed banks around the world and the organizations supporting them, for their vital contributions to maintaining crop genetic diversity and making it available for present and future generations.

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INTRODUCTION

The rapid development of community seed banks throughout the world is increasingly contributing to the conservation and sustainable use of crop genetic diversity, and thus to the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (the Plant Treaty).¹ Community seed banks evolve in response to the growing demand for access to a greater diversity of crop genetic resources among farmers and gardeners and to ensure seed security in remote areas. They are often linked with other activities aimed at enhancing crop diversity and with other objectives, such as food sovereignty and the empowerment of farmers. A many-faceted movement is taking shape.

Two major studies shed light on this development in the North and the South, enabling a closer look at the differing approaches, methods, outreach and achievements, thereby sharing experiences: *Community Seed Banks: Origins, Evolution and Prospects*² from Bioversity International,³ and a survey on community seed banks in Europe⁴ by the EU Horizon 2020 project DIVERSIFOOD.⁵ These studies were presented and illustrated with examples at a side event at the Seventh Session of the Governing Body of the Plant Treaty in Kigali, Rwanda, on 1 November 2017: 'Community Seed Banks: Sharing experiences from North and South'. The side event was co-organized by DIVERSIFOOD, the Fridtjof Nansen Institute of Norway,⁶ Bioversity International and LI-BIRD, Nepal.⁷

The side event gathered about 45 participants.⁸ There might have been many more, but a contact group negotiating the Governing Body's decisions on Farmers' Rights had been organized in parallel, and attracted many people interested in both topics. This report highlights the key contents of the side event, to enable broader sharing of experiences among stakeholders and researchers interested in community seed banks. It also presents key decisions from this Seventh Session of the Governing Body of the Plant Treaty and discusses the opportunities of these decisions for the further development of community seed banks.



- 1 - <http://www.fao.org/plant-treaty/en/>
- 2 - <https://www.bioversityinternational.org/e-library/publications/detail/community-seed-banks-origins-evolution-and-prospects/>
- 3 - <https://www.bioversityinternational.org/>
- 4 - Soon available at: <http://www.communityseedbanks.org/>
- 5 - <http://www.diversifood.eu/>
- 6 - <https://www.fni.no/>
- 7 - <http://www.libird.org/>
- 8 - See the invitation with program in Attachment 1 to this report.

Left picture:
Participants at the side event

Right picture:
Presenters at the side event

I: PRESENTATIONS



Regassa Feyissa, a pioneer of community seed banks in Ethiopia, is inspecting sorghum

1. COMMUNITY SEED BANKS: ORIGINS, EVOLUTION AND PROSPECTS

PITAMBAR SHRESTHA, LI-BIRD, ON BEHALF OF BIOVERSITY INTERNATIONAL⁹

Community seed banks first appeared in the Global South in the late 1980s, established with the support of international and national non-governmental organizations. Countries that pioneered various types of community seed banks include Bangladesh, Brazil, Ethiopia, India, Nepal, Nicaragua, the Philippines and Zimbabwe.

In the Global North and Australia, a specific type of community seed banks emerged: *seed-savers' networks*. Such networks were first established in Australia, Canada, the UK and the USA, mainly from the 1980s, and later spread to other countries.

Community seed banks have grown in number and diversity. In Nepal, for example, there are now more than 100 self-described community seed banks whose functions range from pure conservation to commercial seed production. In Brazil, community seed banks operate in various regions of the country, to mention another example.

1.1 ABOUT THE BOOK COMMUNITY SEED BANKS: ORIGINS, EVOLUTION AND PROSPECTS

Despite 25 years of history and the rapid growth in the number, organizational diversity and geographical coverage of community seed banks, recognition of their roles and contributions has remained surprisingly scanty. *Community Seed Banks: Origins, Evolution and Prospects*, edited by Ronnie Ver-nooy, Pitambar Shrestha and Bhuwon Sthapit,¹⁰ and published by Bioversity International and Earthscan, is the first to provide a global overview of the development of community seed banks. It includes a wide range of case studies from around the world, reviewing their history, evolution, experiences, successes and failures, and the reasons why, as well as challenges and prospects. Thus it fills a significant gap in the literature on agricultural biodiversity and conservation, and their contribution to food sovereignty and security.



From a community seed bank at Bohol, the Philippines

9 - The powerpoint-presentation of Pitambar Shrestha is attached to this report as Attachment 2.

10 - Sadly, Bhuwon Sthapit passed away in August 2017.

An important background to the book was a seminar on community seed banks, held in Nepal in 2012.¹¹ At this seminar, which covered the experience of a wide range of community seed banks in Nepal, Ronnie Vernooy presented a review of community seed banks in various parts of the world. Bhuwon Sthapit offered a thorough theoretical framework for analysing community seed banks, based on a literature review, and Pitambar Shrestha with colleagues highlighted how such community seed banks can contribute to greater local-level access to diverse types of quality seeds. The three later decided to develop this into a systematic review of community seed banks, resulting in the book *Community Seed Banks: Origins, Evolution and Prospects*.

This book covers 35 case studies from 22 countries. It examines the origins and evolution of community seed banks, their functions and activities, governance and management, technical issues, support and networking, policy and legal environment, sustainability and prospects for the future.

1.2 THE HISTORY OF COMMUNITY SEED BANKS

The concept of community seed bank dates back to 1986, when it first appeared in the literature. The Rural Advancement Foundation (RAFI)¹² produced a booklet that pioneered the term *community seed bank*.¹³

In 1989, the Seeds of Survival (SoS) programme was initiated in Ethiopia by USC Canada¹⁴ in collaboration with the Institute of Biodiversity Conservation in Ethiopia,¹⁵ to rebuild farmers' seed systems that were affected by drought and famine. This provided the basis for establishing community seed banks in Ethiopia based on the ideas presented in the RAFI booklet.

In 1992, Southeast Asia Regional Initiatives for Community Empowerment (SEA-RICE)¹⁶ set up the Community-based Native Seeds Research Centre (CONSERVE) as a non-profit organization in the Philippines.¹⁷ Its flagship programme involved the conservation and development of crop genetic resources at the community level – including collection, conservation, research, development and utilization of these resources in partnership with farmers. Supported by SEARICE, CONSERVE initiated the first community seed bank in the Philippines.¹⁸

Around 1992, also the Chile-based NGO Centro de Educación y Tecnología (CET)¹⁹ started establishing community seed banks in several Latin American countries, and various types were started throughout Brazil. Also at this time, the Bangladeshi NGO UBINIG (*Unnayan Bikalper Nitinirdharoni Gobeshona, Policy Research for Development Alternatives*)²⁰ started establishing community seed banks named as 'Community Seed Wealth Centres'.

These were the roots of the community seed bank movement in the South. The main objective of a seed bank has tra-



Four cell analysis of seeds in a Nepalese community seed bank

11 - The proceedings are available at: https://www.biodiversityinternational.org/uploads/tx_news/Community_seed_banks_in_Nepal_past_present_and_future_1642.pdf

12 - Now ETC-Group, <http://www.etcgroup.org/>

13 - For more about the Community Seed Bank Resource Kit from RAFI see <http://rafiusa.org/blog/tbt-community-seed-bank-resource-kit/>

14 - <http://www.usc-canada.org/>

15 - Now Ethiopian Biodiversity Institute: <http://www.ebi.gov.et/>

16 - <https://searice.org.ph/>

17 - See also Regine Andersen, Terresita Borromeo and Nestor Altoveros (2013) 'A community registry in the Philippines' in: Regine Andersen and Tone Winge (eds) *Realising Farmers' Rights to Crop Genetic Resources – Success Stories and Best Practices*, Abingdon: Routledge, p. 83.

18 - Republished as paperback in 2017.

19 - This is also documented in Regine Andersen (2008) *Governing Agrobiodiversity – Plant Genetics and Developing Countries*, Aldershot: Ashgate, p. 250 <http://www.diversidadbioculturalteritorios.org/pg.base.php?id=19&lang=es>

20 - <http://www.ubinig.org/>

ditionally been to save and exchange local seeds, keeping them under the sovereignty of the community and its farmers. However, community seed banks differ in the emphasis of their objectives. Some are most concerned with conservation, others with access and availability in connection with conservation, and others also focus on seed and food sovereignty.

1.3 ORGANIZATION OF COMMUNITY SEED BANKS

There is great variation in the governance and management of community seed banks:

- basic level without key elements of formal governance (as in Rwanda and Bolivia)
- governed by a board of volunteers and managed as a seed network based on membership (as in Brazil, Honduras, Mali, Mexico, Spain, Trinidad, the USA)
- governed by an elected committee with transparent operational plans and guided by locally developed rules and regulatory frameworks (as in Bangladesh, Costa Rica, Nepal, Nicaragua and Zimbabwe)
- governed by an ideology of free access, open source, seed sovereignty (as in Canada)
- controlled by the state/public sector (as in China and Bhutan).

Thus far, most community seed banks in the Global South have been initiated by international or national NGOs. In some cases they are supported by the national governments, as in Nepal, Uganda and India. Some community seed banks have been initiated by governments, as in Mexico, Bhutan and South Africa, whereas others are not supported by any policy or legal instruments, as in Sri Lanka. In general, community seed banks do not have strong governmental policy and legal support.

1.4 HOW COMMUNITY SEED BANKS WORK – AND ASPECTS OF THEIR SUSTAINABILITY

The technical aspects of community seed banks diverge widely. Seeds are normally regenerated annually, but the methods used differ. Seed-storage methods and techniques range from traditional to modern technologies. Some community seed banks are poorly equipped with the necessary physical infrastructure. There is also great diversity as to their involvement in related activities like participatory methods of crop management and participatory plant breeding.

For community seed banks to be sustainable, certain key elements have proven particularly important. Capacity development of involved people is essential, to ensure management quality. It is also important to develop a model for self-financing, to reduce dependence on external funding sources; and to have an enabling legal and political framework so that community seed banks are legally recognized and protected and there is sufficient legal space for them to perform their tasks. Social structures and physical infrastructure are two crucial factors. Finally, systematic planning processes and the development of effective operational mechanisms can be decisive.



Seed hut members exchange seeds, Bangladesh

2. THE RAPID GROWTH OF COMMUNITY SEED BANKS IN EUROPE

REGINE ANDERSEN, FRIDTJOF NANSEN INSTITUTE, NORWAY,
ON BEHALF OF DIVERSIFOOD AND ARCHE NOAH, AUSTRIA^{21 22}

In Europe, community seed banks are being established at a rapid pace, and there are at least 130 initiatives as of 2017. Why is this happening? What is the motivation? Who are the initiators? How do these initiatives develop? What are their successes and failures, their strengths and weaknesses? What is needed to support the movement for the future? The questions are many, and they were all taken up in a comprehensive survey from the EU Horizon 2020 project DIVERSIFOOD.

2.1 ABOUT DIVERSIFOOD

DIVERSIFOOD is a multi-actor project under the EU Horizon 2020 framework programme for research for the period 2015–2019.²³ The project connects networks and actors in Europe engaged in cultivated crop genetic diversity along the whole value chain. It is based on multi-disciplinary research and participatory methods. The project has been developed as an arena for exchange of experiences and dialogue on issues related to the management of crop genetic resources in Europe, supported by research. DIVERSIFOOD has 21 partners from 12 countries in Europe, including organizations involved in seed management and farming as well as research institutions and organizations involved in technical support and communication.

DIVERSIFOOD aims to develop new approaches to plant breeding in order to enhance crop genetic diversity in Europe, including through the further development of participatory plant breeding methods. A further central aim is to contribute to innovative biodiversity management practices and to ensuring the required legal space for such practices in Europe. Ultimately the project seeks to contribute to the diversity of healthy and tasty food products with market potential, with a focus on organic food. The project also aims to contribute new tools and communication methods that can bring actors together to achieve common goals.²⁴



Serving diversity at Arche Noah,
Austria

21: At the side event, this presentation was delivered by Gloria Otieno from Bioversity International, because Regine Andersen had been called to serve as a co-chair of the Contact Group that was established by the Governing Body of the Plant Treaty to negotiate its decisions on Farmers' Rights during its Seventh Session. The first meeting of the Contact Group was held in parallel with the side event. Many thanks to Gloria Otieno, for stepping in at such short notice and for chairing the side event!

22: The powerpoint-presentation of Regine Andersen is attached to this report as Attachment 3.

23: The project has received funding from the EU's H2020 Programme under grant agreement n° 633571.

24: For more information, see: www.diversifood.eu

2.2 ABOUT THE SURVEY ON COMMUNITY SEED BANKS IN EUROPE

Several studies on community seed banks in the South have been conducted, but less is known about community seed banks in Europe, which is why DIVERSIFOOD undertook the survey. At the outset we did not even know how many initiatives there were in Europe. We developed a questionnaire that was distributed to the initiatives and networks we knew about, inviting them to pass it on to all initiatives they knew about. The result was impressive: 85 community seed banks in Europe responded to the survey. Moreover, information on further initiatives indicated that at least 50 more have been established in Europe. Thus, there are at least 135 community seed banks in Europe, of which 85 participated in the survey. There may be various reasons why the remaining around 50 community seed banks did not participate – like scarce capacity, language difficulties, or the length of the questionnaire, which was quite comprehensive. Nevertheless, having received responses from 85 community seed banks, we can now shed some light on the questions raised above.

The questionnaire survey was conducted by Arche Noah, Austria, led by Beate Koller, with DIVERSIFOOD partners contributing to the methodology, as well as implementation. The book *Community Seed Banks: Origins, Evolution and Prospects* (presented above) provided valuable background for developing the questionnaire. The results were presented at a seminar organized together with the Secretariat of the Plant Treaty and Bioversity International at the FAO headquarters in Rome in September 2017. A preparatory workshop was held the day before the seminar, to discuss the results with representatives of central community seed banks in Europe, so as to develop an analysis of strengths, weaknesses, opportunities and threats (SWOT) concerning community seed banks. During the two days of seminar activity, a rich picture of the diversity of com-

munity seed banks in Europe emerged, including their contribution to the management of crop genetic diversity, as well as possible strategies to strengthen this region-wide development.²⁵

On behalf of DIVERSIFOOD, Arche Noah has established a website to communicate the results from the study and enable further communication on, and exchange of information and knowledge among the community seed banks across Europe and beyond.²⁶

A report from the survey and related activities is currently under development and will be published in 2018. The side-event presentation was aimed at highlighting key findings from the survey. Further details can be found in the power point presentation attached to this report.

2.3 KEY ELEMENTS OF COMMUNITY SEED BANKS

Community seed banks around the world are highly diverse, so it is challenging to define the concept on a general basis without excluding promising initiatives. However, they tend to share certain aspects, which may be taken as some of the key elements that describe community seed banks.

First of all, a community seed bank will normally have somewhere *to store* seeds and/or propagating material or to grow plant collections in order to conserve, maintain and make available seeds and/or propagating material. This is at the core of any community seed bank, although this function is sometimes decentralized.

Second, most community seed banks are *jointly managed* by the people involved, whether as an informal network or a registered organization or a cooperative with more than one member.

Further, they usually work on a *non-profit* basis, and are normally part of the *informal*, or *semi-informal seed system*, often with roots in civil society.



25: For more information and access to the presentations, see: <http://www.communityseedbanks.org/events/>

26: See: www.communityseedbanks.org

And finally, the members of a community seed bank usually follow *joint objectives*, based on shared values and rules, thereby often creating their own culture and identity.

2.4 A BRIEF HISTORY OF COMMUNITY SEED BANKS IN EUROPE

The community seed bank movement dates back to the 1980s, and was particularly strong in the South. Community seed banks were established with varying forms and functions, often with assistance from national, regional or international non-governmental organizations. Originally, the core objectives were to conserve and maintain plant genetic diversity and provide access for farmers who could not obtain the necessary seeds or propagating material through the formal seed sector. The community seed banks of the South were often linked to participatory methods for management and breeding of plant varieties and plant populations.

Community seed banks in Europe have evolved as grassroots initiatives from networks or organizations of farmers or gardeners. The Heritage Seed Library of

Garden Organic in the UK was established in 1975 and was probably the first seed savers initiative in Europe. Other early seed saving networks were established in the 1980ies in the North – based in the Netherlands, Austria, Switzerland, Sweden and Germany – and primarily among gardeners. In the 1990s new initiatives were established in Ireland, Germany, the Czech Republic, Greece and Spain. The real growth of community seed banks started after 2000, after 2005 in particular, with new community seed banks emerging particularly in France, Spain, Italy and Greece.

Due to the size of the movement in Europe, and the fact that these community seed banks maintain and make available a wide diversity of crop varieties and populations that could otherwise be lost, the community seed bank movement represents an important contribution to the conservation and sustainable use of crop genetic diversity in Europe. In Europe, as elsewhere in the world, community seed banks help implementing the Plant Treaty.

2.5 THE COMMUNITY SEED BANKS PARTICIPATING IN THE SURVEY – SOME KEY FEATURES

The 85 community seed banks that responded to the questionnaire survey cover most countries in Europe. We have sorted them into three groups, on the basis of similarities and the number of initiatives. These are some central features:

The Iberia Group (Spain and Portugal): Spain is the European country with the highest number of community seed banks (29) and with a rapidly evolving movement. We have included one community seed bank from Portugal in this group, bringing the total to **30 community seed banks**. Their motivations and activities



Celebrating the founding of Réseau Semences Paysannes in France with a mandala of seeds

differ from other countries, so they were defined as one group in the survey. Community seed banks of this Iberia Group have largely been founded by farmers' groups. Whereas conservation was initially the main objective for the community seed banks, the focus today is on raising awareness of the importance of crop diversity and self-sufficiency in seeds for food sovereignty, and control of the means of agricultural production. The most important activity in the Iberia Group is seed multiplication and to make seeds and propagating material available. These community seed banks have extensive interaction with gardeners, mainly with a view to enhancing the diversity of crop varieties in the collections, in order to make them more widely available.

The Central Europe Group (France, Italy, Luxembourg and Belgium): France is the second largest country in terms of the number of community seed banks (17) and shares common aspects regarding motivation and activities with Italy (4), Luxembourg (2) and Belgium (1). With a **total of 24 community seed banks**, these countries form another distinct group. As in the Iberia Group, the founders are largely farmers' groups. Also in the Central Europe Group, conservation was initially a major objective; but even more important were adapting and selecting/breeding varieties and populations

and producing seed. Today conservation as such is regarded as less important, compared to the importance of awareness raising, like in the Iberia Group. The countries of the Central Europe Group focus on education and training often targeted at crop improvement and participatory plant breeding. Community seed banks from this group report the highest level of interaction with producers such as farmers and horticulturalists. They also show the highest level of interaction with breeders and scientists, aimed at improving and developing material; notably, they also engage in participatory plant breeding. And, as in the Iberia Group, private gardeners are also important for community seed banks in the Central Europe Group.

Other European Countries: This grouping, which is slightly larger than the other groups in terms of number of initiatives, shows many similarities among community seed banks, particularly in the north and west of Europe. It includes initiatives in Austria (2), Switzerland (1), Czech Republic (2), Germany (7), Denmark (1), Estonia (2), Great Britain (2), Greece (1), Croatia (1), Hungary (1), Ireland (1), Lichtenstein (1), the Netherlands (2), Portugal (4) and Sweden (1), **totalling 31 community seed banks**. The group might have been divided, and perhaps that will be done in the further analysis of the data received. One characteristic of this group is that its community seed banks have most often been founded by gardeners or their organizations (and not farmers' groups). Conservation has remained the most important objective, although training and seed multiplication are also central activities. This group shows the highest level of interaction with external stakeholders, such as other gene banks. Also here, private gardeners provide important contributions.



Children learn to value crop diversity at Círculos de Sementes, Portugal

2.6 CROPS AVAILABLE IN COMMUNITY SEED BANKS AND WHERE THEY COME FROM

The community seed banks in Europe cover most crops. Some are specialized in a few, others cover many crops. Altogether, these community seed banks report that they maintain grains/cereals, potato, oil seed, other field crops, leafy vegetables, fruiting vegetables, tuber vegetables, legumes, herbs, fruit trees, vines, nuts, ornamentals, wild plants and other crops.

Local land-races and farmers' varieties are dominant in all groups. Also, older commercial varieties represent important material in these community seed banks. Community seed banks of the Central Europe Group also report that they maintain own breeding material.

The most important sources of seeds and propagating material are the founders and members of the community seed banks themselves, and the farmers, gardeners and breeders with whom they exchange material. Also, other gene banks represent a useful source of material for all groups. In addition, community seed banks of the Other European Countries Group report that they to some extent engage in active calls and field collections, and that they also may include marketed seed. These features are less prominent in the other two groups.

2.7 ACHIEVEMENTS, BARRIERS AND STRENGTHS

Community seed banks from all three groups report that their most important achievements are in the areas of training, education and awareness-raising. Also, involvement and participation achieve high scores from all three groups in terms of achievements. Additionally, the Iberia Group and the Other European Countries Group report achievements in the conservation of rare crops, whereas the Central Europe Group reports higher achievements in crop improvement. Achievements in political work and advocacy are reported by the Iberia Group as well as the Central Europe Group. The Central Europe Group also reports some achievements with regard to research.

All three groups report that the greatest strengths of their community seed banks are the enthusiasm, the engagement and the endurance of their volunteers. Also important are the shared visions and values, the feeling of group power and collective action. Solidarity and friendship are central values. In addition, the Other European Countries Group emphasizes the ability to improvise and be flexible: they find it essential to be independent and unhampered by bureaucracy, in order to be resilient. Community seed banks of this group also mention their good contacts with the media, state/public bodies and other networks and organizations as important strengths.

Community seed banks from all three groups note the lack of financial resources as a major obstacle. Lack of manpower comes next: in fact, the Iberia Group sees this as the greatest barrier, and it is also a considerable a problem for the Central Europe Group. A third difficulty reported by all groups is the legal environment, which is largely considered obstructive.



Displaying diversity for awareness rising in Andalusia, Spain

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2.8 SUMMARIZING THE FINDINGS

Community seed banks in Europe are many and diverse. They differ with regard to number per country and region, geographical coverage and the thematic scope of their activities. Some involve 10 members, others more than 10,000 persons. There is massive variation in the number of crops they maintain and how they go about doing this. Further, there are differences in methods and infrastructure, in organizational set-up and social structures. Most community seed banks are set up as associations, foundations, cooperatives or limited liability compa-

nies, but 25% are still informal. Most operate on a non-profit basis, but some allow minor profits. There is also great variation in available financial resources, as well as with regard to aims, triggers, role-models and approaches.

On the other hand, there are also similarities, as we have tried to highlight in this presentation.

In DIVERSIFOOD the evaluation of the survey results as well as the results of the SWOT analysis continues, with a view to identifying important factors that can strengthen the community seed- bank movement in Europe.

3. COMMUNITY SEED BANKS IN JAPAN

YOSHIAKI NISHIKAWA, RYUKOKU UNIVERSITY, KYOTO, JAPAN²⁷

In Japan there are many initiatives aimed at keeping and distributing seeds of traditional crop varieties, with different types of organization and outreach. Many groups and communities keep seeds of traditional

vegetables and minor cereal varieties; in particular, there is a huge diversity of Brassica species found in rural areas. People keep seeds either individually or collectively, depending on how farmers perceive the best way of keeping diversity and maintaining the ideo-types of their varieties. In many cases, there is one farmer who saves seeds for the community, and when other farmers lose their own saved seeds, they may come to this farmer for new supply. The role can be inherited through households from father to son or through a decision by the community. The seeds are generally stored without major infrastructure, such as cold storage. These widespread customary practices may well be considered as representing a form of community seed banking, but the concept of 'community seed banks' as such is not yet familiar in Japan.

Apart from such customary practices, there are several initiatives that have been developed independently by various stakehol-



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Japanese dish with different local vegetable varieties served at Awa

27: The powerpoint-presentation of Yoshiaki Nishikawa is attached to this report as Attachment 4.

ders. Examples include seed exchange activities among organic farmers, as well as a local government-run gene bank in Hiroshima that provides farmers with seeds for loan – whereby farmers can obtain seeds for cultivation and then return the same amount to the gene bank after harvest, facilitating farmers' rights in rural areas of Hiroshima Prefecture.²⁸ A very interesting example is the multi-faceted organization 'Awa' (*millet* in Japanese) in Nara Prefecture near Kyoto. Awa has a non-profit entity working for conservation of the traditional-crop gene pool. It also has a farmers' production group for vegetable sales and community vitalization through income generation, and operates a restaurant (for profit) to ensure the sustainability of the organization's activities. Many stakeholders are involved, as providers of materials and also as restaurant staff.²⁹

As a unique initiative in Japan, school activities have been introduced to maintain crop genetic diversity. Kyoto, the ancient capital of Japan, has a wealth of traditional vegetables, but many are cultivated by only a few farmers, and seeds are no longer harvested regularly, as the farmers are elderly. Although reluctant to give their seeds to government gene banks, some farmers are willing to entrust seed-saving work to secondary school students, to encourage the younger generation to

become actively involved in the conservation and use of traditional vegetables and related knowledge. Students who attend agricultural courses at Katsura High School now grow 14 different traditional vegetables from local seeds; they harvest the seeds, clean them, store them, and can distribute them to producers in the neighbourhood. Technical support from teachers and nearby research institutes are indispensable in this conservation work. The students utilize this opportunity for their education to get hands-on experience of the local culture and traditional varieties.

Community seed-bank activities in Japan are indeed diverse. They range from traditional community-based seed saving to newly established initiatives of various kinds, as exemplified above. Apart from grassroots activities initiated mainly by local farmers, residents and local institutions without much outside intervention, there are also some seed-saving networks loosely connected with the global movement of seed savers, and which have roots in Japan's own cultural and spiritual heritage. Peace Seed,³⁰ founded in 2000 by Mariko Hamaguchi and Norihito Arai, maintains over 500 varieties of rice, as well as many herbs and vegetables. Its co-directors have drawn inspiration from the Australian seed-saver movement and Japan's tradition of natural farming. The Shumei Natural Agriculture Network³¹ is unusual in having a rather formal organizational set-up, and basing their work on the teachings of a spiritual leader, Okada Mokichi, on natural farming.³² This network has more than 1,700 members, who select their own seeds, offering them as thanksgiving at their Shinto style Shrine and receiving the seeds from the shrine for the next season.

Community seed-bank activities in Japan have not yet been coordinated as a nationwide movement. Their decentralized and uncoordinated nature is due mainly to the considerable geographic and climatic



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Obsolete lotus varieties kept by students in Kyoto, Japan

28: See Yoshiaki Nishikawa and Tone Winge (2013): 'The Hiroshima Agricultural Gene Bank: Re-introducing local varieties, maintaining traditional knowledge'. In: Regine Andersen and Tone Winge (eds): *Realising Farmers' Rights to Crop Genetic Resources – Success Stories and Best Practices*. Abingdon: Routledge, pp 167 – 178.

29: <https://www.kiyosumi.jp/> (in Japanese).

30: <https://www.facebook.com/PEACE-SEED-187208888138775/>

31: <https://www.shumei-na.org/> (English) and http://www.snn.or.jp/about/about_index.html (Japanese)

32: https://en.wikipedia.org/wiki/Nature_Farming

variations in the country, which also form the basis for wide-ranging cultural diversity, as well as due to the greatly differing characteristics of seed-bank initiatives. The special

nature and broad diversity of community seed bank activities in Japan stand out as a unique feature, as compared to similar activities elsewhere in the world.

4. COMMUNITY SEED BANKS IN UGANDA

GLORIA OTIENO, BIOVERSITY INTERNATIONAL³³

Community seed banks in Uganda are still few, although the number of community seed banks and related initiatives has increased from only one in 2008 to four in 2017, with a fifth one to be established in early 2018. These community seed banks have been established thanks to technical and financial support from Bioversity International through various projects in partnership with the National Agricultural Research Organization – Plant Genetic Resources Centre (NARO-PGRC). They have been formed in response to local needs to access a wide range of diverse seeds and to conserve traditional varieties for future use. These community seed banks are linked to the national gene bank of Uganda, which has not only helped to restore lost local varieties by providing repatriation of germplasm from its ex-situ collections but has

also provided back-up of community collections. Further, the national gene bank has provided technical support in conservation and management of community collections through training programmes. The community seed banks have received training in the production of Quality Declared Seed (QDS) and are currently producing QDS of two varieties of beans.

Annual seed fairs are held at the community seed-bank locations, and exchange of seeds and knowledge is encouraged between and among farmers. The community seed banks have also been used as learning platforms for training farmers in seed production, storage, preservation, community seed-bank management and conservation.

One example is the Kiziba community gene bank. It was established in 2008 as a joint



Bean diversity at a seed fair of the Kiziba community seed bank, Uganda

Entering the Kiziba community seed bank, Uganda



³³: The powerpoint-presentation of Gloria Otieno is attached to this report as attachment 5.

initiative between farmers and scientists who were promoting the use of bean diversity as a means of controlling pests and diseases. The local community provided the land; Bioversity International and the National Agricultural Research Organization (NARO) contributed by constructing the building that houses the community seed bank. The Kiziba community seed bank currently serves over 1000 farmers, providing seeds of 70 varieties of beans. Initially, the community had only 13 varieties of beans; the other varieties came from other communities in Uganda, and some were provided by the national gene bank. Members of the Kiziba community seed bank have been trained in QDS production; having obtained certification, they have started selling QDS-certified seeds locally. This community seed bank is now being used as a learning platform for the creation of other community seed banks in Uganda and neighbouring countries.³⁴

For example, Bioversity International and the National Agricultural Research Organization of Uganda are jointly implementing community seed bank activities with support from the Benefit Sharing Fund of the Plant Treaty, as part of the project 'Promoting open source seed systems of forages, legumes, millet and sorghum for climate change adaptation in Kenya, Uganda and Tanzania'. Capacity building

and knowledge exchange are key components of the project. Kenya and Tanzania have prominent seed-savers' networks and community seed exchange networks which facilitate the access to and exchange of genetic resources among farmers. In Kenya, for instance, farmers have an umbrella network of Seed Savers operating in many areas. These networks also include women seed savers who are trained in the production of quality seed and who work to conserve seeds of traditional varieties. In Tanzania, farmers' seed-exchange networks are particularly important for women, and custodian farmers play a crucial role in providing seeds of new varieties as well as of traditional landraces. Acknowledgement of the importance of custodian farmers is shown by the training programmes and exchange programmes offered to them, as well as the recognition accorded to them in national fora.

Uganda's community seed banks are also linked with research and development. Farmers have been involved in participatory varietal evaluation and selection for climate-change adaptation: over 360 farmers were involved in selecting varieties of sorghum, millet and beans to meet climate-related challenges, such as drought and early maturity.

5. COMMUNITY SEED BANKS IN ZIMBABWE

PATRICK KASASA AND ANDREW MUSHITA, COMMUNITY TECHNOLOGY DEVELOPMENT TRUST, ZIMBABWE³⁵

The Community Technology Development Trust (CTDT) has initiated and supported community seed-banking initiatives for almost 23 years. The initiatives were initially located in three districts but now co-

ver ten districts, thanks to the support of partners such as Oxfam Novib, HIVOS, the Development Fund and SwedBio, to mention a few. In all ten districts, community-level seed-saving initiatives contribute

34: For further information, see: <https://www.bioversityinternational.org/news/detail/increasing-access-to-quality-and-diverse-seed-a-journey-to-the-kiziba-community-seedbank/>

35: The powerpoint-presentation Patrick Kasasa and Andrew Mushita is attached to this report as Attachment 6.

to the conservation, restoration, revitalization, strengthening and improvement of local seed-supply systems, with the main focus on local varieties.

The 1991/1992 drought that ravaged southern Africa, and was declared a national disaster in Zimbabwe, proved instrumental in the establishment of community seed banks there. Most farmers lost their traditional crop varieties during that drought. In 1998, with the experience of the drought still in mind, the CTDI, in consultation with government agencies and farmer communities, established a pilot project of three community seed banks in the districts of Uzumba-Maramba-Pfungwe, Tsholotsho and Chiredzi. Seven additional community seed banks have since been constructed, bringing the total number of community seed banks in Zimbabwe to ten. The main objectives of all these community seed banks are to:

- ensure on-farm conservation and sustainable use of plant genetic resources for food and agriculture, including local neglected and underutilized plants
- facilitate easy access to seeds of choice by smallholder farmers
- contribute to the availability and exchange of ecologically adaptive seeds to farmers
- provide opportunities for crop diversification

- promote knowledge and seed exchange, and local experimentation by farmers
- facilitate the introduction of improved and climate-resilient varieties, for greater food and nutrition security
- contribute to the strengthening and improvement of integrated farmers' seed systems
- increase awareness of agricultural biodiversity conservation and management, diversity within crop species and the role of germplasm exchange
- hold seed fairs annually at each community seed bank, to facilitate seed banking, and exchange of seeds and knowledge.

Within the community seed bank itself, seed is stored in three separate rooms: general storage, bulk storage and the family collection rooms. Community seed bank members are provided with membership cards that allow them to deposit seed in the general or family collection sections/rooms of the community seed bank. Seed from on-farm seed production plots and from Farmer Field Schools may be stored in the bulk or general storage rooms. All members of the community seed banks have equal access to the seed stored in these facilities. They are required to provide evidence of their membership each time they need a service from the facility. Community seed bank members are expected to take part in (i) on-farm seed production activities, normally arranged at nearby Farmer Field Schools (ii) seed fairs held annually at the CSBs and (iii) in training sessions organized by the community seed bank management committees, government agricultural extension and CTDI staff.

Seeds in the general and bulk storage rooms belong to all members of the community seed banks. They can access the seed free of charge. The bulk seed storage room is intended to serve as a seed reserve in case farmers lose their crops in the event of a drought, flood or other catastrophe. Seed in the bulk storage room can also be sold by the community seed bank management



From a community seed bank in Zimbabwe

committees to outsiders, making it possible to generate income to continue its activities. However, also non-members, especially the most vulnerable such as elders and orphans, may access the seed free of charge, on the recommendation of the management committee — a social commitment agreed upon by members of each seed bank. Each community seed bank maintains a community biodiversity register and passport data of local crops and crop varieties stored and associated traditional knowledge. These registers are monitored by the agricultural extension staff; in some districts, CTD T staff also assists. The annual seed and food fairs held at each community seed bank serve as a further mechanism for maintaining and sharing local knowledge.

The community seed bank committee works closely with CTD T field officers and local agricultural extension (AGRITEX) officers to register participating farmers. CTD T and staff of the National Gene Bank (NGB) of Zimbabwe work closely together to assist farmers with all the modalities of seed banking. The two institutions help farmers during germplasm collection and deposition in the community seed banks. Duplicate samples of seeds are also stored in the NGB as back-up. In cases where communities have lost some of their crop varieties, they request the NGB to repatriate these to the communities, which multiply the few seeds on the fields of experienced Farmer Field Schools.



From a seed fair in Zimbabwe

New collections are added to the Community Biodiversity Register that is maintained at the office of each community seed bank. The following information is recorded in these biodiversity registers:

- name of farmer
- national identification or registration number
- name of village
- community or ward number/name
- name of crop and variety
- date of collection
- accession number
- shelf number
- germination percentage/rate
- quantity of seed collected
- name of person receiving the material.

This information is also kept at CTD T head office as a back-up system. As a contribution to capacity building of elected community seed bank committee members, the CTD T has produced a community seed banking manual for use by technical staff as well as farmer leaders.³⁶

Community seed banks provide farmers with access to seeds not only of local varieties but also of improved varieties through participatory variety selection and plant-breeding efforts. This includes obtaining access to (via the use of the Standard Material Transfer Agreements under the Plant Treaty) stable in-bred lines from research institutes such as the International Maize and Wheat Improvement Center (CIMMYT), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the National Crop Breeding Institute. These organizations also offer assistance, such as technical training to farmers. Farmers benefit from advanced seed conservation technologies. The community seed bank collections are backed up by the extension service of AGRITEX, offering valuable services in cases of emergency.

Zimbabwe's community seed banks do more than conserving seeds: they also produce and sell them. Community-based seed production initiatives have come to

36: The proceedings from a workshop on the CTD T Community Seed Banking Training Manual can be downloaded here: <http://www.ctdt.co.zw/community-seed-banking-training-manual-3/>. See also the CTD T Community-based seed production manual here: <http://www.ctdt.co.zw/downloads-publications/>

play an important role in the seed supply system of smallholder farmers. Locally produced seed is sold to local farmers at affordable prices. Farmers can sell seeds within a 40-km radius, in conformity with the national laws which allow the marketing of non-inspected seed within that radius. Through Farmer Field Schools, farmers work closely with researchers and extension service officers to further develop and improve their seeds through participatory action research and participatory plant breeding.

Currently there is no legal framework to protect and support community seed banks in Zimbabwe. The CTDT has been working with the Ministry of Agriculture to assemble points for a draft Plant Genetic Resources Bill for possible consideration by the relevant authorities. Ideas being circulated include supporting the operations of community seed banks through the introduction of a fund that could be used for supporting community seed bank activities. Proposals also include a recommendation that the state should provide support to communities/farmers that have played significant roles in conserving and maintaining plant genetic resources, in order to provide incentives for further activities.

Members of Parliament, traditional leaders, government ministries and farmer organizations such as the Zimbabwe Farmers' Union are all working with community seed bank committees. The SADC Plant Genetic Re-

sources Centre in Zambia has highlighted the success and relevance of community seed banks and is considering how the Zimbabwean model can be replicated in other SADC member states. Community seed banks receive support from the government extension services, the national gene bank and the national crop breeding institute. The CTDT has been instrumental in securing such support as part of its campaign for national recognition and implementation of the Plant Treaty.

Over the years, the CTDT has facilitated the establishment of linkages with key players as summarized in **Figure 1**.

The CTDT notes that:

- community seed banks are critical for agricultural biodiversity conservation and sustainable use;
- community seed banks ensure farmers own control of the means of crop production;
- community seed banks ensure ready access to quality seed that is cost-effective;
- crop diversification is central for building resilience among farmers in the face of climate change
- community seed banks contribute to the implementation of the Plant Treaty, especially Article 6 (Sustainable Use) and Article 9 (Farmers' Rights).

Figure 1:



6. COMMUNITY SEED BANKS IN NEPAL

PITAMBAR SHRESTHA, LI-BIRD, NEPAL³⁷

The first community seed bank in Nepal was established in 1994 by USC Canada at Dalchoki, Lalitpur. It marked the start of a movement that has now spread to most parts of the country. Central in this development has been the Nepalese NGO Local Initiatives for Biodiversity, Research and Development (LI-BIRD), which has been supporting community seed banks since 2003. Established in 1995, LI-BIRD is a non-profit, non-governmental organisation committed to utilizing local resources, innovations, and institutions for sustainable management of natural resources for improving the livelihoods of smallholder farmers. LI-BIRD works along the research–development continuum and has pioneered the development and strengthening of participatory research methodologies in agro-biodiversity and natural resource management, playing an instrumental role in institutionalizing these approaches in national systems.

Working in collaboration with various partners, LI-BIRD has supported the es-

tablishment of 21 community seed banks in Nepal, with six new ones planned for 2018. Partners include national and local authorities and research and extension agencies as well as national and international non-governmental organizations such as Bioversity International, the Development Fund to name a few. Such collaboration has proved promising for scaling up activities and ensuring community seed bank sustainability in a longer time perspective. The Department of Agriculture (DoA) and a few NGOs are also involved in establishing and strengthening community seed banks in Nepal. Through the support from the Development Fund, Norway, LI-BIRD also supported establishing and strengthening community seed banks in India, Bangladesh and Sri Lanka during the period of 2009 to 2016.

Community seed banks in Nepal fulfil important functions for farming communities. They improve seed security by making seed of diverse crop varieties readily accessible and available. They promote the use of crop genetic diversity and thereby enhance food and nutrition security, as well as farmer incomes. Some community seed banks are also involved in participatory plant breeding and enhancement of crop genetic resources. By strengthening self-sufficiency in seeds, community seed banks contribute to the empowerment of farmers and their groups. The empowerment of farmers' organizations managing community seed banks have led to accessing and leveraging resources from local government and district level extension offices. These are all important factors with regard to food sovereignty.

To achieve its goals, community seed banks in Nepal pursue various activities, most importantly:



Members of community seed banks at Kachorwa, Bara, showing the diversity of local rice varieties they have conserved in community seed banks to visitors

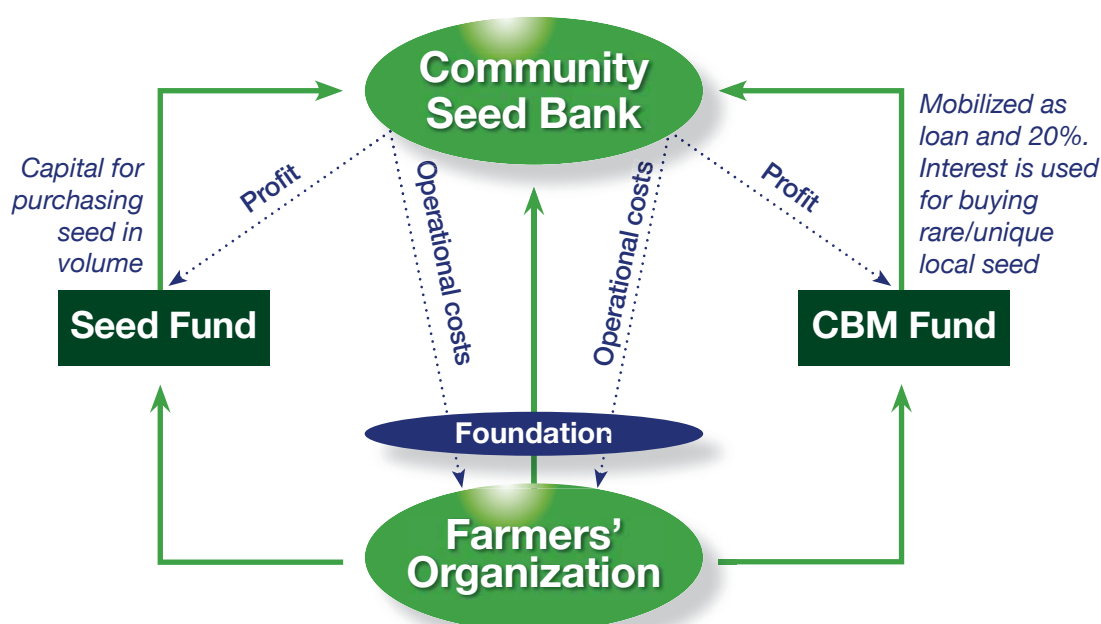
³⁷: The powerpoint-presentation of Pitambar Shrestha is attached to this report as Attachment 7.

- conservation of crop genetic resources that are rapidly being lost from farmers' fields and from natural habitats
- supplying quality seeds of various crop varieties produced locally, suited to local conditions
- awareness creation and education on the importance of crop genetic resources for current and future food and nutrition security, and of adapting crops to climate change
- strengthening local seed systems through farmer-to-farmer exchange of seeds and knowhow.

Community seed banks in Nepal supported by LI-BIRD manage a total of 62 crop species for food and agriculture and a total of 908 varieties, covering rice, other cereals, legumes, oil seed, root crops, vegetables, spices, leafy vegetables and other species. Many local varieties would have been lost, had it not been for the community seed banks.

Community seed bank capacity for production and selling/distribution is increasing rapidly. Most community seed banks in Nepal produce seed of both local varieties and improved varieties. Improved varieties for seed production are selected on the basis of local demand, and source seed for seed production are obtained from the Nepal Agricultural Research Council (NARC), the District Agriculture Development Office (DADO) and seed companies. The number of households receiving seeds directly from community seed banks is increasing in line with the capacity of community seed banks to produce and sell/distribute. However, more than 60 percent of the seeds produced by community seed banks are marketed through agricultural extension services and seed companies, which enables also the community seed banks to earn some income. Thus, seed sales represent a good source of income of farmers and community seed banks for managing crop genetic resources on farm. This is illustrated in the **figure 2** below:

Figure 2: **The Buisness Model** in Operation



In April 2015, a massive 7.6 earthquake hit 14 districts of Nepal including Gorkha, Lamjung and Tanahun, with dozens of after-shocks and devastating consequences. Three community seed banks supplied altogether 9875 kg of rice seed to farmers who were badly affected by the earthquake in the three above-mentioned districts, benefiting 1807 households. This made clear the importance of community seed banks in times of disaster, and not least how important it is to have a community seed bank *network* in the country.

Sustainability is the main challenge facing community seed banks around the world. LI-BIRD in Nepal has developed a model for sustainability measures. The existence of a strong farmers' organization is essential for sustaining a community seed bank; indeed, it can be seen as a foundation for the community seed bank. The farmers' organization that manages the community seed bank can establish two types of funding mechanisms: a seed fund, and a community biodiversity management fund. The seed fund is used for purchasing seed produced by the farmers; once the seed is sold, the seed fund is reimbursed with the addition of the small profit earned from selling the seed. A portion of the profit earned through selling the seed is used

for managing community seed bank administrative costs – staff salaries, stationery, refreshments, etc. On the other hand, the community biodiversity management fund can be mobilized for providing easy access to finance to community seed bank members. Such loans are used for economic activities such as seed production, animal husbandry or operating small grocery shops. In the form of interest, this also adds some regular income to the farmers' organization, again divided into two parts: adding to the core fund, and using a small share for operational costs. The key principle is that the farmers' organization operating a community seed bank should develop mechanisms that can generate some regular income.

Drawing on our experience, we have identified 10 characteristics of a well-functioning community seed bank:

1. It is operated by a legally registered farmers' organization
2. It conducts regular training and capacity building
3. It undertakes identification, documentation and conservation of local varieties
4. Its physical infrastructure includes seed storage and equipment
5. It uses improved seed storage technologies
6. It collaborates with local government bodies, extension services, agricultural research bodies, and NGOs
7. Annual seed production plans and business plans are developed and implemented
8. Seed transaction permission and seed certification are obtained, where required, from the relevant government authorities
9. It carries out safety duplication seeds of local varieties
10. It is engaged in the development of mechanisms to ensure sustainability.



Members of community seed bank in Agyauli, Nawalparasi sending rice seeds to the earthquake affected area after the mega earthquake in Nepal in 2015

II: OUTCOME OF THE SEVENTH SESSION OF THE TREATY'S GOVERNING BODY FOR COMMUNITY SEED BANKS

REGINE ANDERSEN, FRIDTJOF NANSEN INSTITUTE/DIVERSIFOOD



Logo of the Seventh Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture

At the Seventh Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture, two resolutions were adopted with relevance for community seed banks.³⁸ These resolutions mark increasing attention among the Contracting Parties of the Plant Treaty to the value and importance

of community seed banks in fulfilling the objectives of the Treaty and thereby helping to ensure the conservation and sustainable use of crop genetic diversity for food security. The most relevant provisions are presented below.³⁹ We will also address the role of DIVERSIFOOD with regard to the Treaty.

1. DECISIONS ON FARMERS' RIGHTS RELEVANT FOR COMMUNITY SEED BANKS

Farmers' Rights related to seed and propagating material is an important issue in connection with the conservation and sustainable use of genetic resources

and for food security. Farmers are custodians of crop genetic resources in the field, and rights are important to enable them to continue their contribution

38: The Governing Body also adopted a number of other resolutions on items of relevance to the work of CSBs, e.g. related to the Multilateral System of Access and Benefit-sharing, the implementation of the Global Information System and on the Multi-Year Programme of Work that inter alia addresses the important issue of digital sequence information, that was highlighted in Kigali, to be further dealt with at the next session of the Governing Body. All resolutions from the Seventh Session of the Plant Treaties Governing Body can be accessed here:

http://www.fao.org/plant-treaty/meetings/meetings-detail/en/c/888771/#jfmulticontent_c424255-5

39: For full texts, see: <http://www.fao.org/3/a-mv102e.pdf> and <http://www.fao.org/3/a-mv086e.pdf>.

to the global genetic pool and thereby to short- and long-term food security – inter alia through community seed banks. These are among the reasons why farmers' rights are recognized in the (the Plant Treaty).⁴⁰ However, the topic has proven contentious ever since the concept first emerged in the 1980's;⁴¹ the formal seed sector was especially critical to such rights. Meanwhile there is an increasing realization of the importance of ensuring legal space for both the formal and the informal seed sectors to make their contributions to the global genetic pool.

Since 2007, developing countries have urged to form a working group that could develop voluntary guidelines for the implementation of Farmers' Rights, to assist countries that are parties to the Treaty.⁴² Despite fierce opposition from some OECD countries, at the Seventh Session of the Governing Body of the Plant Treaty, from 30 October to 3 November 2017 in Kigali, Rwanda, consensus was finally achieved on forming an Ad Hoc Technical Expert Group to develop options for encouraging, guiding and promoting the realization of Farmers' Rights at the national level.⁴³ Several delegates have declared this to be a breakthrough in the negotiations.⁴⁴ The development of such options for the realization of Farmers' Rights may provide important guidance as to how governments can better support the development of community seed banks and their activities.



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In the Resolution 7/2017 on Farmers' Rights,⁴⁵ the Governing Body further invites the Contracting Parties to promote sustainable biodiverse production systems and facilitate participatory approaches such as community seed banks, community biodiversity registries, participatory plant breeding and seed fairs, as tools for realizing Farmer's Rights as set out in the Article 9 of the Plant Treaty. Community seed bank representatives may thus approach their national focal points for the implementation of the Plant Treaty with regard to following up this provision.

The Governing Body invites each Contracting Party to consider developing national action plans for the implementation of Farmers' Rights (Article 9 of the Plant Treaty), in line with the provisions on conservation and sustainable use of crop genetic resources (Article 5 and 6 of the Plant Treaty), and to share information regarding progress with the development and implementation of such action plans. In light of the provision above, such action plans may address the development of community seed banks at the local level as well as nation-wide, as appropriate.

Furthermore, the Governing Body invites each Contracting Party to engage farmers' organizations and relevant stakeholders in matters related to the realization of Farmers' Rights, the conservation and sustainable use of plant genetic resources for food and agriculture, and to promote awareness-raising and capacity-building towards this end. Community seed banks are relevant stakeholders and may thus be among those organizations that could be engaged in decision making at the national level. As community seed banks have proven useful arenas for awareness-raising and capacity building, they may be seen as partners in efforts towards achieving these aims. Community seed banks should pay attention to these possibilities in developing their strategies and plans.

In general, the provisions of relevance to community seed banks in Resolution 7/2017 on Farmers' Rights from the Seventh Session of the Plant Treaties' Governing Body are comprehensive and promising.

Farmer in Ethiopia harvesting teff

40: See: <http://www.fao.org/plant-treaty/en/>

41: See Regine Andersen (2005) The History of Farmers' Rights: A Guide to Central Documents and Literature The Farmers' Rights Project, Background study 1. FNI Report 8/2005, Lysaker: FNI. Available at: <https://www.fni.no/getfile.php/131903/Filer/Publikasjoner/FNI-R0805.pdf> See also: Regine Andersen (2016): 'Historical Context: Evolving International Cooperation on Crop Genetic Resources' and 'Farmers' Rights: Evolution of the International Policy Debate and National Implementation' in Michael Halewood (ed.) Farmers' Crop Varieties and Farmers' Rights: Challenges in Taxonomy and Law. London/New York, Routledge, 2016 pp. 99-152.

42: As reflected in e.g. the reports from (1) The informal international consultations on Farmers' Rights in Lusaka, Zambia, 2007: http://www.farmersrights.org/pdf/farmers_rights_lusaka_consultation_final_report.pdf; (2) The Global Consultations on Farmers' Rights in Addis Ababa, Ethiopia in 2010. FNI: <https://www.fni.no/getfile.php/131651/Filer/Publikasjoner/FNI-R0111.pdf>; and (3) The Global Consultation on Farmers' Rights in Bali, Indonesia in 2017: <http://www.fao.org/3/a-bt110e.pdf>

2. DECISIONS ON SUSTAINABLE USE OF RELEVANCE FOR COMMUNITY SEED BANKS

In Resolution 6/2017 on sustainable use of crop genetic resources,⁴⁶ the Governing Body requests the Secretary, in collaboration with other stakeholders and subject to the availability of financial resources, to organize regional capacity-building workshops on topics such as participatory plant breeding, community seed bank development, sustainable biodiverse production systems and promoting the value of farmers' varieties. Community seed banks may thus contact the Secretary or their national focal points for the Treaty, if they wish to participate in, or contribute to, such activities.

The Secretary is also requested to support national programmes in policy development for sustainable use of PGRFA and in building partnerships and mobilizing resources, also this in collaboration with other stakeholders

and subject to the availability of financial resources. Community seed banks may play a role as well, as stakeholders and contributors to such national programmes for policy development.

Further, the Secretary is requested to convene regional meetings on advancing the characterization and sustainable use of plant genetic resources for food and agriculture, including assessment of needs of local farmers and other relevant local stakeholders and the identification of possible means to address those needs, including through participatory approaches. Also these activities are to be carried out in collaboration with other stakeholders and subject to the availability of financial resources. And also here, community seed banks may have important roles to play as providers of information as well as recipients of such services.

All in all, the provisions on sustainable use of crop genetic resources for food and agriculture from the Seventh Session of the Plant Treaties' Governing Body provide important possibilities for community seed banks in addition to the provisions under Farmers' Rights (see above).

A central question is how these resolutions will be followed up in practice among the Contracting parties. Community seed banks may address this question towards the focal points of the Plant Treaty in their countries or engage in lobby activities to promote compliance.



Farmer breeder breeding for drought resistant rice in Nepal

43: For more information, see: <https://www.fnri.no/news/fnri-contributes-to-breakthrough-in-negotiations-under-the-plant-treaty-article1601-330.html>
See also Resolution 7/2017 from the Seventh Session of the Governing Body on Plant Genetic Resources for Food and Agriculture: <http://www.fao.org/3/a-mv102e.pdf>

44: See summary of the Seventh Session of the Governing Body of the Plant Treaty by the Earth Negotiation Bulletin at <http://enb.iisd.org/download/pdf/enb09691e.pdf>

45: See: <http://www.fao.org/3/a-mv102e.pdf>

46: See: <http://www.fao.org/3/a-mv086e.pdf>

3. THE ROLE OF DIVERSIFOOD WITH REGARD TO THE PLANT TREATY – WITH A VIEW TO COMMUNITY SEED BANKS

The EU Horizon 2020 project DIVERSIFOOD was presented briefly in paragraph 2.1 of this report. A central feature of DIVERSIFOOD is its multi-actor approach, where farmers and their organizations across Europe are at the core, and where the emphasis is on collaboration with breeders, scientists and actors along the food chain. This approach provides the project with direct access to the views of farmers engaged in diversified farming – particularly valuable for evaluating the legislation related to diversified farming in Europe, which also forms part of the project. Many of the involved farmers are organized in community seed banks. Legal space for farmers to continue to save, use, exchange and sell farm-saved seed and plant propagating material is a crucial condition for maintaining and enhancing the diversity of cultivated plants, including through community seed banks. Current legislation in the EU enforces severe restrictions on these practices, thereby affecting Farmers' Rights as provided in the Treaty. Therefore, an important message from DIVERSIFOOD on Farmers' Rights in Europe is that formal and informal/local seed systems must be recognized as being complementary, and that it is essential to ensure the legal space for both systems to make their contributions to the conservation and sustainable use of crop genetic resources for food and agriculture.⁴⁷



Community seed banks represent an important contribution to the conservation and sustainable use of crop genetic diversity and thus to the implementation of the Treaty, as part of the mostly informal seed system. To support and promote their contribution, it is necessary to ensure conducive legislation and policies.

The norms on Farmers' Rights are shaped in an ongoing process under the Plant Treaty. The Governing Body of the Plant Treaty is its highest decision-making body and convenes biennially. At each session, a resolution with decisions is adopted on Farmers' Rights, reflecting the consensus among the contracting parties. Between sessions, regional or international multi-stakeholder consultations are often held. DIVERSIFOOD-partner the Fridtjof Nansen Institute (FNI) of Norway has been centrally involved in all international consultations to date, as co-organizer and/or co-chair, and participates in the sessions of the Governing Body as well. At the Seventh Session of the Governing Body of the Plant Treaty, Regine Andersen of the FNI co-chaired the contact group that negotiated the resolution on Farmers' Rights, together with Godfrey Mwila from Zambia.⁴⁸

DIVERSIFOOD will continue to follow up the processes under the Plant Treaty relevant for community seed banks and the management of crop genetic resources for food and agriculture, including the follow-up of the 2017 resolution on Farmers' Rights from the Governing Body of the Plant Treaty.

47: See the DIVERSIFOOD fact sheet on Farmers' Rights here:
http://www.diversifood.eu/wp-content/uploads/2017/04/Diversifood_innovation_factsheet_9.pdf

48: For more information on the contribution of FNI, see:
<https://www.fni.no/news/fni-contributes-to-breakthrough-in-negotiations-under-the-plant-treaty-article1601-330.html>

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1. INVITATION TO THE SIDE EVENT

SIDE EVENT

to be held during the 7th Session of the Governing Body of the ITPGRFA in Kigali, Rwanda.

Community Seed Banks:

Sharing Experiences from North and South

Wednesday 1 November 2017, lunch time (13:15 - 14:30)
Kigali Convention Centre, Room AD1

The fast development of community seed banks in different parts of the world is increasingly contributing to the conservation and sustainable use of crop genetic diversity, and thus to the implementation of the Plant Treaty. Community seed banks evolve in response to the growing demand for access to a greater diversity of crop genetic resources among farmers and gardeners and are often linked also with other activities to enhance crop diversity. A movement is taking shape.

Two major studies shed light on this development in the North and the South, and enable us to take a closer look at their different approaches, methods and outreach, sharing experiences: *Community Seed Banks – Origin, evolution and prospects* from Bioversity International and a *Survey of community seed banks in Europe* by the EU Horizon 2020 project DIVERSIFOOD. At this side event, both studies will be presented and illustrated with examples from different countries.





PROGRAM

13.15: Lunch for participants of the side-event

13.25: Welcome and brief introduction to the side event on behalf of the organizers.
Regine Andersen, Fridtjof Nansen Institute (FNI), Norway, and partner in DIVERSIFOOD.

13.30: Community seed banks: Origin, evolution and prospects. Presentation of a Bioversity International review of community seed bank case studies by Ronnie Vernooy, Pitambar Shrestha and Bhuwon Sthapit. *Pitambar Shrestha, LI-BIRD*

13.45: The fast growing movement of Community Seed Banks in Europe. Presentation of a survey of 85 community seed banks by DIVERSIFOOD. *Regine Andersen, FNI/DIVERSIFOOD*

14.00: Community seed banks – some examples:
 - Japan: Yoshiaki Nishikawa, Ryukoku University, Kyoto, Japan
 - Uganda: Gloria Otieno, Bioversity International, Uganda
 - Zimbabwe: Andrew Mushita, Community Technology Development Trust
 - Nepal: Pitambar Shrestha, LI-BIRD
 - Europe: Slideshow with photos and music from DIVERSIFOOD

14.25: Feed-back and summing up.

14.30: Closing the side-event



A light lunch will be served

ORGANIZERS

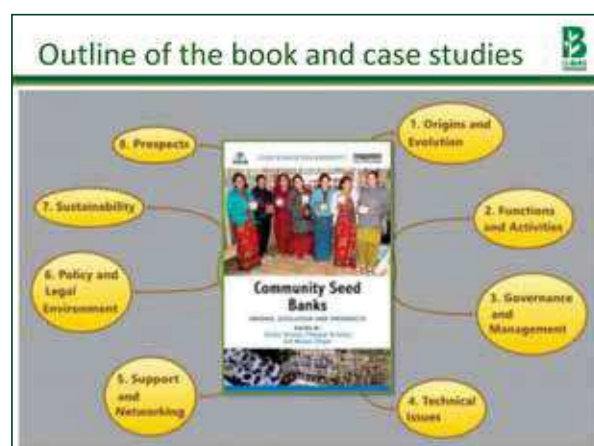
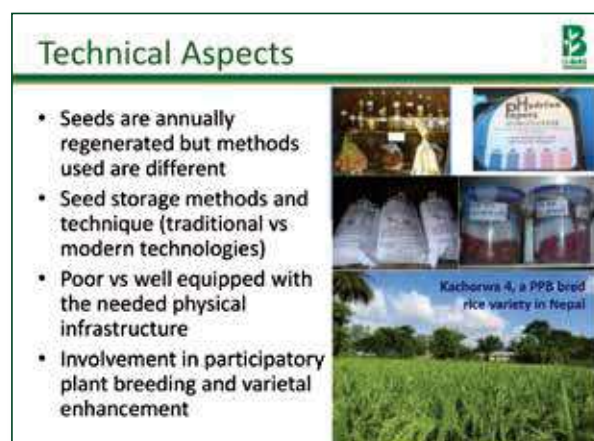
The EU Horizon 2020 project DIVERSIFOOD and the Fridtjof Nansen Institute, Norway (FNI)
in collaboration with Bioversity International and LI-BIRD, Nepal.







2. PRESENTATION BY PITAMBAR SHRESTHA, LI-BIRD: COMMUNITY SEED BANKS: ORIGINS, EVOLUTION AND PROSPECTS



Governance and Management



Basic stage of development without key formal governance elements (Rwanda, Bolivia)



Governed by ideology of free access, open source, seed sovereignty (Canada)

Governed by a board of volunteers and managed as a seed network based on membership (Brazil, Honduras, Mali, Mexico, Spain, Trinidad, USA)

Governed by an elected committee (both men and women) with transparent operational plans and guided by locally developed rules and regulatory framework (Bangladesh, Costa Rica, Nepal, Nicaragua, Zimbabwe)

Strongly controlled by public sector (China and Bhutan)

Technical Aspects



- Seeds are annually regenerated but methods used are different
- Seed storage methods and technique (traditional vs modern technologies)
- Poor vs well equipped with the needed physical infrastructure
- Involvement in participatory plant breeding and varietal enhancement



Technical Aspects



Sri Lanka



Bhutan



Nepal



Zimbabwe



Uganda



Brazil

Policy and Legal Aspects



- Mostly initiated by I/NGOs and later on supported by national legislations e.g. Nepal, India, ...
- Some are initiated by government e.g. Mexico, Bhutan, South Africa.
- Some are still not supported by any policy or legal instrument e.g. Sri Lanka.

In general, the community seed banks has not gotten the strong policy and legal support from government.

Sustainability- the key elements



Enhancement of human capital



Development of self financing model



Legally recognized and protected



Enhancement of social and physical capital



Systematic planning process and development of effective operational mechanism



Sustainable community seed bank

For more information:

www.libird.org

www.biodiversityinternational.org

www.communityseedbanks.org

Thank You!

Local Initiatives for Biodiversity, Research and Development (LI-BIRD)
www.libird.org info@libird.org

3. PRESENTATION BY REGINE ANDERSEN, FNI/DIVERSIFOOD, MADE BY GLORIA OTIENO, BIOVERSITY INTERNATIONAL: THE RAPID GROWTH OF COMMUNITY SEED BANKS IN EUROPE



A multi-actor project (2015-2019)

- Connecting networks in Europe engaged in cultivated diversity
- Involves actors from the whole value chain
- Multi-disciplinary research, participatory plant breeding
- Arena for exchange of experiences and dialogue on issues related to PGRFA in Europe



www.diversifood.eu



The Objectives

15 species

DIVERSIFOOD aims to develop:

- New approaches to plant breeding to enhance plant genetic diversity, including participatory plant breeding, based on populations of local or rare varieties
- Innovative biodiversity management and legal space
- Diversity of healthy and tasty food products with market potential – focus on organic food
- New tools and communication methods bringing actors together to achieve common goals.

www.diversifood.eu



COMMUNITY SEED BANKS IN EUROPE

Results from a questionnaire survey
Carried out by Beate Kolter, ARCHE NOAH, Austria
in collaboration with DIVERSIFOOD-partners

Presentation by Regine Andersen, Senior Research Fellow,
Fridtjof Nansens Institut/DIVERSIFOOD



Trying to define CSB

A community seed bank...:

- Has somewhere to store seeds/propagating material or to grow plant collections
- Is jointly managed by people involved, either as an informal network or a registered organization or a cooperative with more than one member.
- Is *non-profit* an part of the informal, or semi-informal seed system, with roots in civil society
- Follows joint objectives, based on shared values and rules, creating an own culture and identity

Background

- Origin in the 1980s, mainly in the South, different forms and functions
- Core objective: To maintain plant genetic diversity and provide access for farmers who cannot find what they need in the formal seed sector
- Often linked to participatory methods for management and breeding of plant varieties and populations



Background

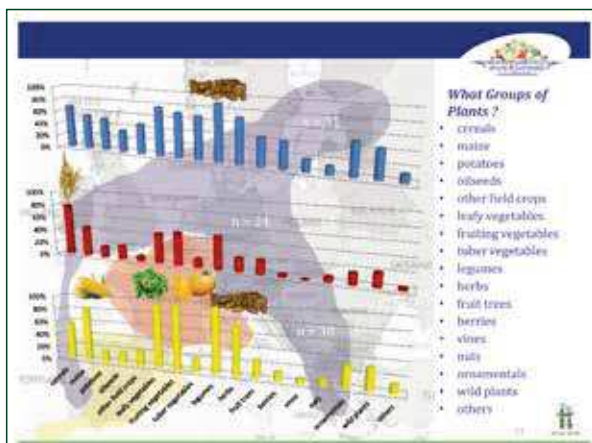
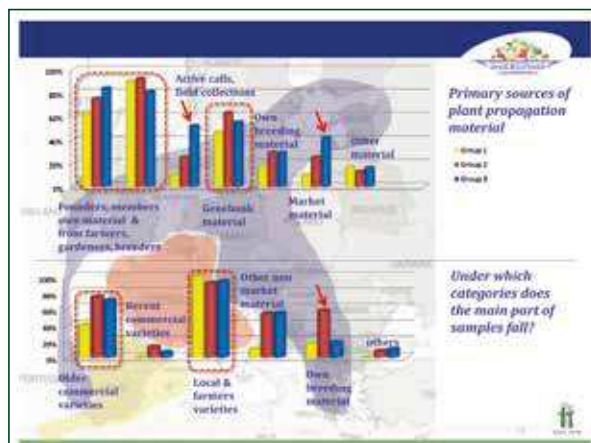
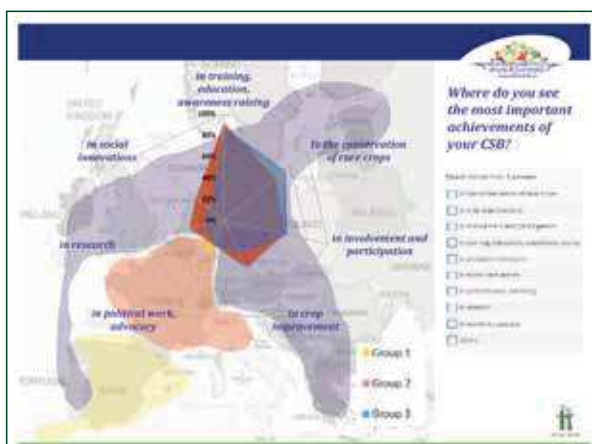
- Several studies on CSBs in the South; we know little about CSBs in the North
- Therefore this study



Background

- CSBs in Europe have evolved as grassroots initiatives from networks/organizations of farmers or gardeners
- Represent an important contribution to the conservation and sustainable use of crop genetic diversity in Europe, and to make this available for farmers and gardeners.
- Thus an important contribution to the implementation of the Plant Treaty in Europe.
- We distributed a questionnaire to the initiatives we knew about, and asked them to help distributing it further to other initiatives



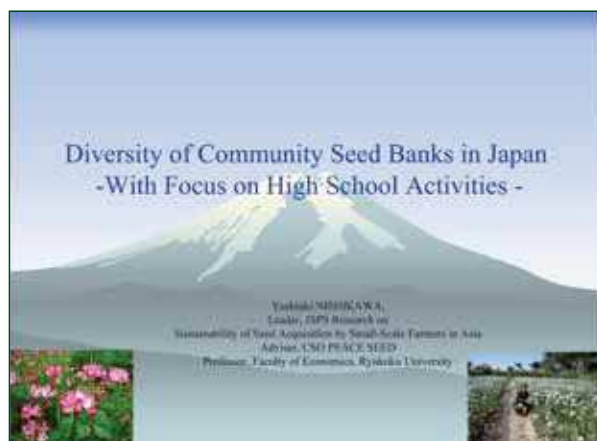


SUMMARY: CSB Initiatives in Europe are....

Many.... and diverse!

- In their numbers per region
- In their geographic and thematic scope of activities
- In their age - from 1 to 35
- In their social structures:
- 25% still informal, others associations, foundations, cooperatives and limited;
- Most non-profit, some to minor extent for profit
- 10-10.000 persons involved in the communities
- Big variations with regards to available resources
- variations in stakeholder group numbers and priorities
- variations in crop species and numbers - **not all deal with seeds**
- different methods and infrastructure - **not all have seedbanks**
- Different aims, triggers, role-models and approaches

4. PRESENTATION BY YOSHIAKI NISHIKAWA, RYUKOKU UNIVERSITY, KYOTO, JAPAN: COMMUNITY SEED BANKS IN JAPAN



Genetic Diversity in Japan

- Not many indigenous crop species
- Secondary diversity center of *Brassicaceae* spp. (turnip and Japanese radish)
- Landraces have been preserved through repeated seed harvests of seeds by farmers.
- Few infrastructure as community seed banks, but many exchanges of seeds among growers.

Diversity of community seed banks in Japan

Actor / Type of organization	General function	Character of seed banking	Example(s)
Community Based Organization/group	Production of local traditional crops	Leader farmers' house / individual farmers	Nagano traditional vegetables (radish/turnip)
Non Governmental Organization	Promotion of organic farming Production of local traditional crops	Exchange and Saving of seeds among members	Japan Organic Agriculture Association(nation-wide) Hyogo seed conservation group (local)
Multi-faceted Organization	Conservation and use of genetic resources	Community vitalization through conservation	Project Awa (=millet)
Semi-governmental Organization	Conservation and use of genetic resources	Seed loan for re-introduction and community vitalization	Hiroshima Agricultural Gene Bank
Schools	Education, research and community activities	Stewardship entrusted from original (aged) growers	Katsura High School in Kyoto Prefecture

Land Race Gene Pool Maintenance in Community (Initiatives in Nagano Pref.)

Traditional turnip variety kept by individual farmers in a community with frequent exchange among members

Selection of ideo-type plants by farmers for future maintenance of the variety.

They bring their own crops and compare with crops of others. More than 200 types were identified.

Population is very small and therefore subject to genetic drift.

Note: Two photos above are post evaluation of variety and for image purpose only. photo © Hiroshi

Hyogo seed conservation group (local)

Seeds re taken and exchanged by many members, but stored by the leader at his house.

Project Awa (Project Millet) = multi-faceted



Farmers (production and seed harvest, including introduced varieties)
NGO (seed storage and research)
Restaurant (use of product and profit making) (Michelin one star)

7

Traditional Vegetables of Kyoto



Pumpkin (Shishigatani-Kabocha)
and Japanese pickling
melon (Katsura-Uri)

Photo ©Kyo-yasai
Sweets Factory Flaver's

Market selling traditional
vegetables in Central Kyoto

Photo ©Organization for
urban-rural interchange
revitalization

8

Katsura High School in Kyoto (1) Seed banking as guardians for Kyoto Traditional Vegetables



14 different traditional varieties are kept by the high
school seed bank, entrusted by local farmers.
Students save seeds as part of Training in
Agriculture for Future Farmers Scheme at school.

9

Katsura High School in Kyoto (2) Seed banking as steward for Kyoto traditional vegetables



Public relations and
school garden tour

Comparison between traditional variety
of spring onion and its F1 counterpart

Product development
using traditional variety of
oriental melon = ice cream
for diabetes patients /
functional foods

10

Message from Japan's cases

High School Project

Students are relatively independent of power structure of the society and
neutral for conservation activities, thus trusted by farmers and other actors.
Technical support from teachers and nearby research institutes are
indispensable.

Weakness of Japan's case

Not coordinated as nation-wide movement in line with international framework
such as 'Farmers' rights'

BUT this can be also strength

Pure grass roots activities initiated by farmers, residents, and individual
institutions themselves without intervention from outside are rather unique.
If connected with greater stakeholders, it may contribute up-scaling and
sustainability.

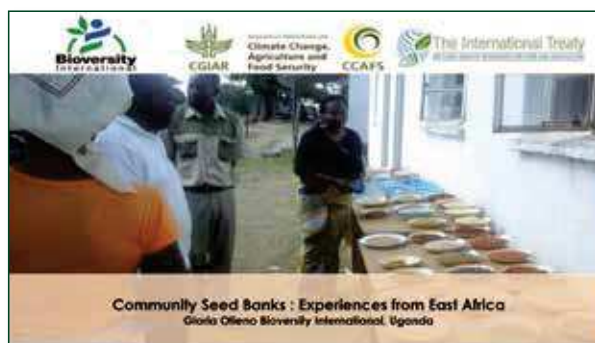


Thank you for
your attention
This is my most
favorite variety.

Special thanks to Toshihiko Matsuda,
supervisor of the school project, and his
students
JSPS research grant 17H04627

12

5. PRESENTATION BY GLORIA OTIENO, BIOVERSITY INTERNATIONAL: COMMUNITY SEED BANKS IN UGANDA



Technical and Financial Support for the Establishment of CSBs

- Established by support from various organizations
- 4 active CSBs in Uganda – 1 to be established next year
- Seed Savers' Networks in Kenya – Seed saving & multiplication
- Local Seed Exchange networks in Tanzania

Saving and Exchanging Knowledge and seeds through seed fairs

Seed fair organized by Kiziba CSB in Uganda   Seed fair in Nyando, Kenya

Partnerships: Linking CSBs with National Gene banks and Research in Uganda

Established with Bioversity's Support

CAPACITY DEVELOPMENT
Participatory Variety Evaluation and Selection

Farmers in Nyando, Kenya evaluating sorghum varieties from the national gene bank collections

Evaluating banana varieties in Nakaseke, Uganda

Increasing accessibility to seed through Production of quality declared seed (QDS) in Uganda : 2CSBs

Recognizing Custodian farmers

Supporting Women farmers in Kenya

Women seed savers in Gigili, Kenya: Supported by Seed Saver's Network

- Trained on production of quality seed & proper storage
- Established their own seed bank
- Have developed a community biodiversity register
- Preservation of Indigenous Knowledge

Challenges

- Quality Seed Production
- Climate change
- Registration of farmer Varieties (for QDS) Production
- Seed Regulations
- The Business Model & Sustainability

Thank you

Gloria Otieno
g.otieno@cgiar.org

www.biodiversityinternational.org/subscribe

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6. PRESENTATION BY PATRICK KASASA AND ANDREW MUSHITA, COMMUNITY TECHNOLOGY DEVELOPMENT TRUST, ZIMBABWE: COMMUNITY SEED BANKS IN ZIMBABWE

Community Seed Banks

Sharing Experiences from North and South



Andrew Mushita and Patrick Kasasa
Community Technology Development Trust, Zimbabwe

Introduction

Why Community Seed Banks?

- Ensure on-farm conservation and sustainable use of PGRFA including local neglected and underutilized crops and plants
- Facilitate easy access to seeds of choice by smallholder farmers.
- Contribute to the availability and exchange of ecologically adaptive seeds to farmers

- Provide an opportunity for crop diversification
- Facilitates introduction of improved and climate tolerant varieties for increased food and nutrition security.
- Strengthen and improve integrated farmer seed systems

Inside a Community Seed Bank



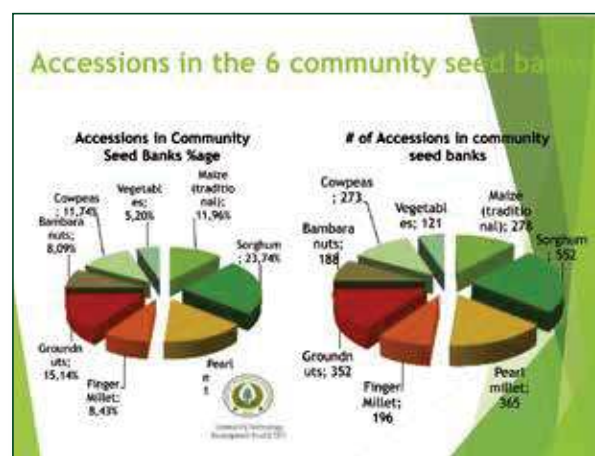


Examples from Zimbabwe

- Established 9 Community seed banks with support with 6 of them having been supported by the SD-IS programme;
- Training of CSB local management committees for sustainability;
- Trained communities on the modalities of germplasm collection in collaboration with the National Gene-bank;
- Duplicate materials in the National Gene-bank of Zimbabwe;
- Farmers able to access these materials for restoration and enhancement and on-farm characterization;

What activities are taking place at CSBs

- Annual food and seed fairs to facilitate seed, knowledge and information exchange;
- Awareness raising among policy makers, local authorities, scientists, traditional leaders, development partners and extension workers.
- As a result:
  - There is easy accessibility and timely provision of seeds to farmers
  - Farmers now cultivate between 4 and 6 crops per household from the previous 2 or 3;
  - There is storage seed reserve to buffer against climate change especially droughts.



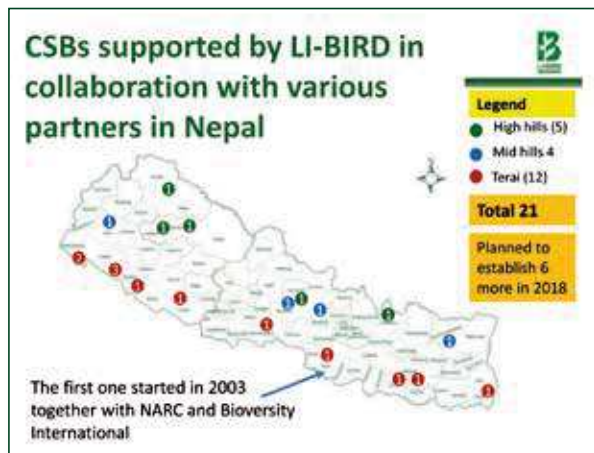
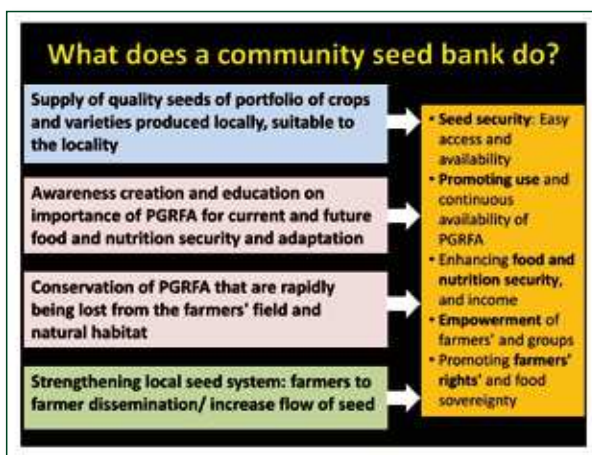
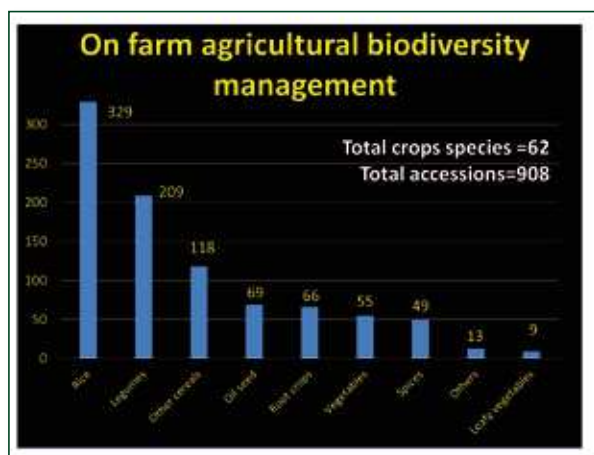
Conclusion

- CSBs are critical for agricultural biodiversity conservation and sustainable use;
- CSBs ensure that farmers own and control means of production by farmers;
- Ensuring easy access to quality seed that is cost effective;
- Crop diversification in the face of climate change and building resilience
- CSBs contribute to the implementation of the Treaty, especially Article 6 (Sustainable Use) and Article 9 (Farmers Rights)

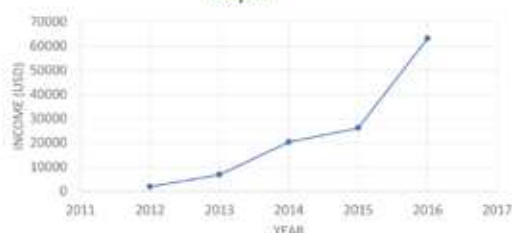


THANK YOU

7. **PRESENTATION BY PITAMBAR SHRESTHA, LI-BIRD, NEPAL:** COMMUNITY SEED BANKS IN NEPAL



The amount of cash went on to the pocket of farmers through 6 community seed banks in Nepal



Community seed banks are more than seed, it's a good source of income of farmers and community seed banks.

Community Seed Banks in the Time of Crisis

- Three CSBs supplied 9875 kg rice seed to earthquake hit three districts - Gorkha, Lamjung and Tanahun.
- 1807 households benefited



The Business Model in Operation



More Information:

www.libird.org
Pitambar@libird.org

Thank you!

Local Initiatives for Biodiversity,
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and LI-BIRD, Nepal

Paris, February 2018.

Contact: Regine.Andersen@fni.no

www.diversifood.eu

