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COMMUNITY SEED BANKS IN EUROPE

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REPORT

FROM A STAKEHOLDER WORKSHOP IN THE FRAMEWORK OF THE DIVERSIFOOD PROJECT, HELD IN ROME ON 21 SEPTEMBER 2017

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Community Seed Banks in Europe
Report from a DIVERSIFOOD stakeholder workshop in Rome on September 21st, 2017
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www.diversifood.eu

SUMMARY

For more than 40 years, community seed banks (CSBs) around the world have emerged as part of the informal seed system to counteract the loss of locally adapted crop types through the development of collective management systems. In Europe, the number of CSBs has grown rapidly in the last 15 years. However, most initiatives do not use the term "community seed banks" themselves; they identify themselves as networks, houses, libraries or archives for seeds (and other plant propagation parts). This diversity of synonyms reflects the general diversity within the CSB movement in Europe, also in terms of age, size, goals, stakeholder groups, areas and activities, as well as governance structures. This can be explained by the fact that most CSBs in Europe have emerged locally from grassroot initiatives. Different role models like older CSBs in Europe, the seedsavers in the USA and Australia, or social movements in the global South were adapted and developed by CSBs according to their local conditions. Roles and concepts of European CSBs can be roughly described by keywords such as "diversity", "conservation", "exchange", "community" and "sovereignty", though their exact meaning has not been collectively defined and might differ between initiatives.

Most CSBs in southern and western European countries are mainly initiated and run by farmers; in many northern and central European countries, private gardeners played or play a central role. This, of course, is a gross simplification of a reality that is more diverse and dynamic. In terms of goals and activities, many initiatives have seen a shift from mainly conservative to more evolutionary approaches - plant adaptation and participatory plant breeding are playing an increasing role in European CSBs. The initiatives work with a wide range of crops and manage, on average, several hundreds of accessions - genetic resources consisting mainly of local and farmers´ varieties and old commercial varieties as well as their own breeding populations.

As their greatest achievements, CSBs in Europe consider the impact of their training and awareness raising activities. The lack of financial resources, leading to a shortage of manpower and technical equipment, as well as poor regulatory conditions, are the most frequently reported obstacles. Key strategies to overcome these barriers include networking and cooperation within the CSB movement in Europe and around the world, mutual support and learning, and cooperation with other stakeholders sharing similar goals and values. Furthermore, the positive image and credibility that many initiatives have been able to build through their work is an opportunity that can be used in public campaigns for better outreach and to improve the funding base.

However, CSBs in Europe have not only succeeded in raising public awareness of the importance of plant and seed diversity, protecting local varieties and adapting them to current needs. They have enriched our society with their innovations, such as newly adapted tools and methods and social forms. They help to build a more sustainable food system and to make our society more resilient and better prepared for the challenges we are facing.

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INTRODUCTION

Community seed banks (CSBs) have been founded as part of the so called "informal seed systems" since the early 1980s in many parts of the world, with various forms and functions. Their main aims are to address the loss of agricultural diversity and to enhance access to seeds adapted to local conditions that the market does not adequately provide for, based on a participatory approach of community crop management and crop improvement.

In recent years, several case studies and analyses on CSBs worldwide have been published, notably the book *Community Seed Banks – Origin, Evolution and Prospects*[1] from Bioversity International, focussing on examples from the Global South, where community seed banks emerged first and can look back on rich experiences stemming from decades of agricultural and social practises. However, very little has been published on initiatives in European countries.

The EU Horizon 2020 project DIVERSIFOOD[2] therefore aims to shed light on the situation and development of CSB initiatives in Europe. The interest is not purely academic. In fact, the research results shall feed in a process of self-reflection *within the CSB community*: Who are we? How similar, how diverse? Where does the movement come from and where are we heading to? What makes the CSB initiatives different from those in other parts of the world, and what can we learn from each other? What roles did CSBs play in the last decades in the European societies, what do we envision for the future?

Furthermore, the documentation of the long history, the numbers and the diversity of European CSB initiatives aims at raising awareness on a political level. The CSBs as communities of practice had, have and will have an important impact for the management of genetic resources for food and agriculture, but also for diverse and sustainable agriculture, for food security and food sovereignty.

Within DIVERSIFOOD, a mapping and a survey on community seed banks in Europe have been carried out, comparing their history, objectives and structures. 84 European initiatives contributed to the survey. In September 2017, two workshops were organized in Rome.

The workshop on September 21st aimed at stimulating an in-depth exchange and discussion on different aspects of community seed banks in Europe and worldwide. The workshop gathered 57 participants from 23 European and non-European countries; 42 being representatives of CSB initiatives, five with a different NGO background, four representa-

[1] www.bioversityinternational.org/e-library/publications/detail/community-seed-banks-origins-evolution-and-prospects/
[2] www.diversifood.eu
[3] Online map and survey results available at: www.communityseedbanks.org

tives of international institutions and six representatives from the research sector, including partners from the DIVERSIFOOD project and representatives of Bioversity International.

The workshop was planned as a dialogue forum. In addition to presentations and discussions, an analysis of strengths, weaknesses, opportunities and threats (SWOT analysis) was carried out. Based on this analysis, discussions focused on the future roles of CSBs to strengthen agricultural diversity and food security in Europe and the gaps and needs in this regard.

The outcomes of the workshop on 21 September served as an input for a second workshop on 22 September at the FAO Headquarters, the results of which will be published in a separate report in 2018. The results from the workshops were also presented at a side event at the Seventh Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture in Kigali 1 November 2017: 'Community Seed Banks - Sharing Experiences from North and South'. A report from the side event is available at diversifood.eu.

This report highlights the key contents of the workshops, to enable broader sharing of experiences among stakeholders and researchers interested in community seed banks.

Participants at the Workshop on September 21st

THE DIVERSIFOOD PROJECT CONTEXT

RICCARDO BOCCI, RETE SEMI RURALI, ON BEHALF OF THE DIVERSIFOOD PROJECT

DIVERSIFOOD is a multi-actor project under the EU Horizon 2020 framework programme for research for the period 2015–2019.

The project´s mission is to evaluate and enrich the diversity of cultivated plants within diverse agroecosystems so as to increase their performance, resilience and quality through a multi-actor approach.

By integrating existing experienced networks and using specific and relevant cases across Europe the project aims at strengthening "food culture" to improve economic viability of local chains resulting in a greater diversity of produce with a cultural identity.

Thanks to the composition of its consortium, DIVERSIFOOD covers the whole food chain from genetic resources to marketing, connecting and amplifying local existing actions.

It is dedicated to design specific concepts and methodologies for combining in situ experiments to ensure performance and quality. It evaluates the genetic resources of a dozen underutilized and forgotten plant species for organic and low-input agriculture or marginal/specific conditions. Various combinations of underutilized legumes associated with several cereals are tested in the framework of DIVERSIFOOD. The project aims at generating new diversity by innovative breeding methods designed for more intra-crop variation.

DIVERSIFOOD wants to help to facilitate cooperation between participatory research networks and professional breeders as well as policy makers in connecting formal and informal seed systems in Europe in relation to international negotiations on Farmers' rights with the International Treaty on Plant Genetic Resources for Food and Agriculture.

Key-lessons based on the diverse experiences in the project will be shared to support on-farm seed production networks to guarantee high quality seed.

DIVERSIFOOD has 21 partners from 12 countries in Europe,. DIVERSIFOOD uses multi-actor approaches by involving a wide range of stakeholders from field to fork in several European countries, e.g. public and private research institutes, universities, technical organizations, professional breeders, processors, retailers, citizen networks and networks of farmers involved in on-farm breeding and seed production.

For more information see www.diversifood.eu.

1. DESCRIBING COMMUNITY SEED BANKS IN EUROPE

RESULTS OF A SURVEY CARRIED OUT IN THE FRAMEWORK OF THE DIVERSIFOOD PROJECT

BEATE KOLLER, ARCHE NOAH[1]

1.1 SUMMARY

Very little has been published about community seed banks in Europe[2]. In order to achieve a better overview of the initiatives in different European regions, their backgrounds, objectives and structures, the partners of the DIVERSIFOOD project collaborated in conducting a comprehensive survey.

The results show the great diversity of initiatives with regard to their age, size and internal structures, and indicate different approaches to the concept of conservation of agricultural biodiversity versus the more evolutionary concept of "dynamic management" of plant genetic resources.

In chapter 1.4, a table gives a comparative overview of six regional groupings of European CSBs.

As an overall trend, the number of community seed banks in Europe seems to be rapidly growing since 2005, at least in some European regions.

An online map (figure 1) that has been set up as a product of the survey shall serve as a tool in the future to support networking and exchange within the CSB movement as well as with other stakeholders, within Europa and beyond.

Figure 1 | The online map of community seed banks in Europe is available on **www.communityseedbanks.org**

1.2 METHODS

The survey was conducted by Beate Koller, Arche Noah, Austria, with DIVERSIFOOD partners contributing to the methodology, as well as implementation. The book *Community Seed Banks – Origins, Evolution and Prospects* provided valuable background for developing the questions.

A list of contacts to CSBs in Europe was compiled with support from the civil society organisations that are partners in the DVERSIFOOD consortium. The list served as a starting point for spreading the invitation to the survey in a kind of "snowball effect". The survey was online from May 2016 to July 2017 on the platform "Lamapoll.de" in English, German, Spanish, Italian and French. The support of DIVERSIFOOD partners involved in the different CSB networks was crucial for reaching out and mobilizing local and regional initiatives to contribute to the survey. All initiatives that contributed to the survey were invited to the DIVERSIFOOD workshop on Community Seed Banks on September 21st, 2017 to discuss the results.

All participants who answered the following "filter" question positively could start the survey: *"I have to do with seeds*

[1] www.arche-noah.at

[2] See for example: 1) Vernooy R, Shrestha P, Sthapit B (eds.): Community seed banks. Origins, Evolution and Prospects. Bioversity International, 2015. 2) Réseau Semences Paysannes: Les Maisons des Semences Paysannes : Regards sur la gestion collective de la biodiversité cultivée en France. 2014. 3) Collectif d'auteurs: Gérer collectivement la biodiversité cultivée. Eduagri Editions, 2015. 224 pages.

or other plant propagation material that is managed - for example conserved, propagated, distributed - by a community." Does this description fit your situation?
Apart from that, no other criteria were applied for pre-selecting the potential participants. A single or binding definition of what is a community seed bank does not exist. As the survey aimed at mapping the different situations of CSB initiatives, we wanted to include, rather than exclude, a broad range of different initiatives.

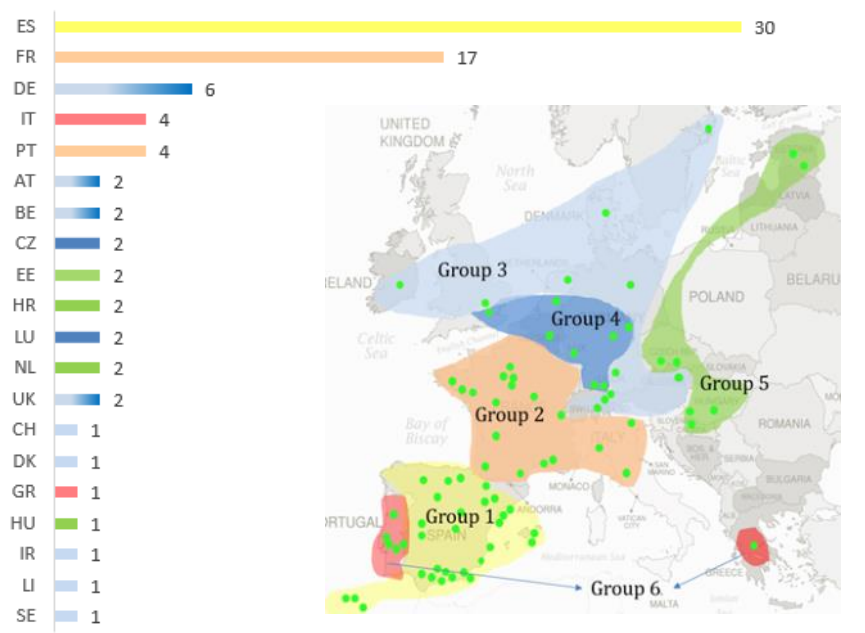


Figure 2 | 84 initiatives from 20 European countries participated in the survey – with the largest numbers of answers coming from Spain and France, followed by Germany, Italy and Portugal. The answers of all initiatives were clustered in six groups, as shown in the map.

1.3 RESULTS & DISCUSSION

84 initiatives from 20 European countries completed the survey (figure 2), with 1 initiative answering twice, so the survey received 85 answers in total.

CLUSTERING GROUPS

After a first rough analysis of the data, it seemed promising to cluster the incoming answers into groups that could be compared with regard to the different features that were observed in the survey. The criteria for grouping the answers were mainly geographical (i.e. the seat of the initiatives), but also included other aspects as described below. In this report, the survey results will therefore be presented by comparing six groups of initiatives[3]. In figure 2, coloured patches in a map of European countries indicate the geographic coverage of all six groups. This little map will be shown in the graphs throughout the report to make it easier to keep overview of the six groups. The six groups can be described as follows:

Group 1 (yellow) the Spanish group: Spain is the European country with the highest number of CSBs that answered the survey **(30)**[4]**.** Many Spanish initiatives are connected through a national network.

Group 2 (orange), the French / Italian group: France is the second largest country in terms of the number of CSBs (17) that answered the survey, and shares common aspects regarding motivation and activities with Italy (4), totalling **21 CSBs.** Many French and Italian initiatives are connected through networks operating on their national level.

Group 3 (light blue) covers seed savers´ organisations in Northern & Central Europe that were founded until 1995. The data analysis showed that these initiatives display many similarities. There are organisations in Austria (1), Denmark (1), Germany (2), the UK (1), Ireland (1), Liechtenstein (1), the Netherlands (1), Sweden (1) and Switzerland (1), in total **10 CSBs.**

Group 4 (dark blue) covers 11 CSBs in Northern & Central Europe that were founded since 1995 (but mostly after 2005) in Belgium (2), Luxembourg (2), Austria (1), Germany (4), the UK (1) and the Netherlands (1)**.**

Group 5 (green), the group of the new EU member states covers CSBs in Croatia (2), the Czech Republic (2), Estonia (2) and Hungary (1), totalling **7.**

Group 6 (red), the Portuguese and Greek group: With 4 initiatives in Portugal and one in Greece, this is a rather small group of **5 CSBs**. For several

[3] The first analysis that was presented at the workshop on Sept. 21st in Rome and published on the internet only compared 3 groups. Following the workshop discussions, the data was analysed again and six groups were derived from the data material.
[4] The mapping of Spanish initiatives resulted in a total number of around 40 (personal information by María Carrascosa, president of the Spanish Seed Network)

reasons, it was decided to report this group seperatly. Firstly, the data showed that despite geographical vicinity, the Portuguese initiatives displayed more similarities with the French / Italian group than with the Spanish group. Furthermore, we did not want to add more complexity to groups 1 and 2. Finally, considering the climatic differences between Portugal and France / Italy, it seemed reasonable to set up a distinct group for the initiatives in Portugal and Greece.

TOTAL NUMBERS OF CSBS IN EUROPE?

Information on further initiatives indicates that many more initiatives have been established in Europe so far. It is however difficult to make a reliable estimation on actual numbers. Some concrete indications exist though. The Spanish Seed Network Red de Semillas mapped 40 initiatives in Spain, of which 30 participated in the survey; the French Reseau Semences Paysannes estimates that around 50 CSB initiatives can be found in France, of which 17 participated in the survey. Some other CSB initiatives that are known to the project partners are missing out from the survey - e.g. Peliti (GR), Kokopelli (FR, BE, CH) or the Finnish seed savers.

At the same time, the map of participating initiatives shows some real "blank areas", especially in the eastern and south-eastern part of Europe. We assume that especially in the new member states of the EU, more local initiatives do exist. Maybe it is due to less connectedness of those initiatives to regional or national seed networks that both survey and workshop failed to reach out to those communities. Language and cultural issues might have played another role.

Generally, there may be various reasons why the remaining CSB initiatives did not participate in the survey – like technical problems, scarce capacity, language barriers, or the length of the questionnaire, which was quite comprehensive (see Annex).

It should be mentioned here that is was not an explicit decision to focus on seeds in the survey. However, the term community SEED banks led to a selection within initiatives. In principal, there is no reason to exclude initiatives working with e.g. fruit trees, and indeed some initiatives with a strong focus on this field participated in the survey. Addressing such initiatives more proactively would probably have had an impact on the results of the survey.

These questions may be subject to further research and networking activities.

1.3.1 THE EMERGENCE OF CSBS IN EUROPE

The beginnings of the CSB movement in Europe date back to the late 1970s and early 1980s, as shown in figure 3. Europe's first community seed banks that contributed to the survey were established in the Northern and Central European countries – the Netherlands, UK, Denmark, Switzerland, Austria, Sweden and Germany – and primarily as seed-saving networks among gardeners[5]. For many, the US based Seed Savers Exchange served as a role model[6]. Garden Organic's Heritage Seed Library however – known at the time as Henry Doubleday

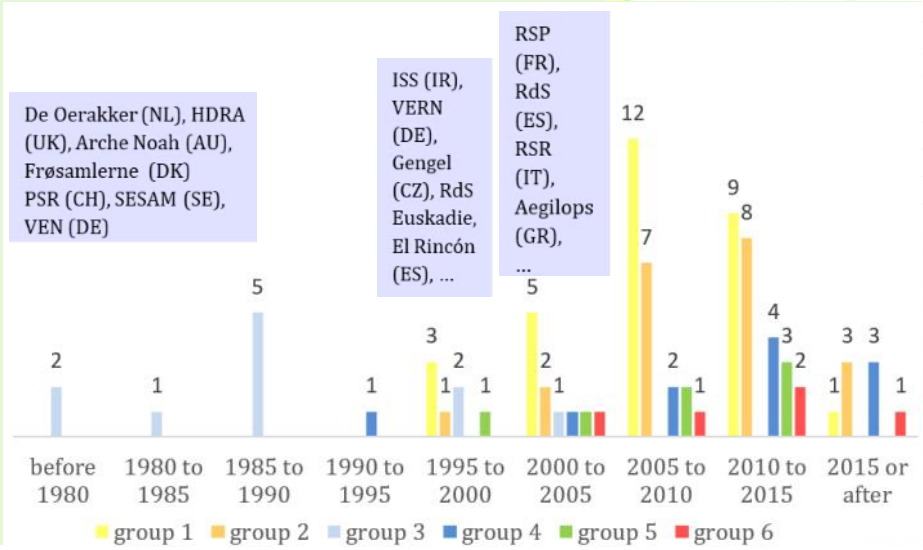


Figure 3 | Period of foundation and absolute numbers of reporting CSB initiatives

[5] Few Spanish initiatives also that date back to the 1980ies, however they did not reply to the survey (Source: Personal information of María Carrascosa, president of the Spanish Seed Network).

Research Association - was founded in 1975, at about the same time as the Seed Savers Exchange in the USA.

Of the answering initiatives, many were established from 1990 in Luxemburg, Ireland, Germany, the Czech Republic, Greece and Spain. The real growth amongst the reporting CSBs started after 2000, in particular after 2005, with new CSBs especially in France and Spain, but also in other European regions. As mentioned above, only few CSB initiatives from the new member states and other European countries in south-eastern Europe responded to the survey.

1.3.2 WHO WERE THE MAIN FOUNDERS OF THE CSBS?

Figure 4 shows the backgrounds of founders of CSBs in Europe. Comparing the groups, we see that in Spain, France, Italy, Portugal, Greece (groups 1,2 and 6), but also in group 4, between 70 and 90% of participants mentioned producers (i.e. farmers and horticulturalists) as founders.

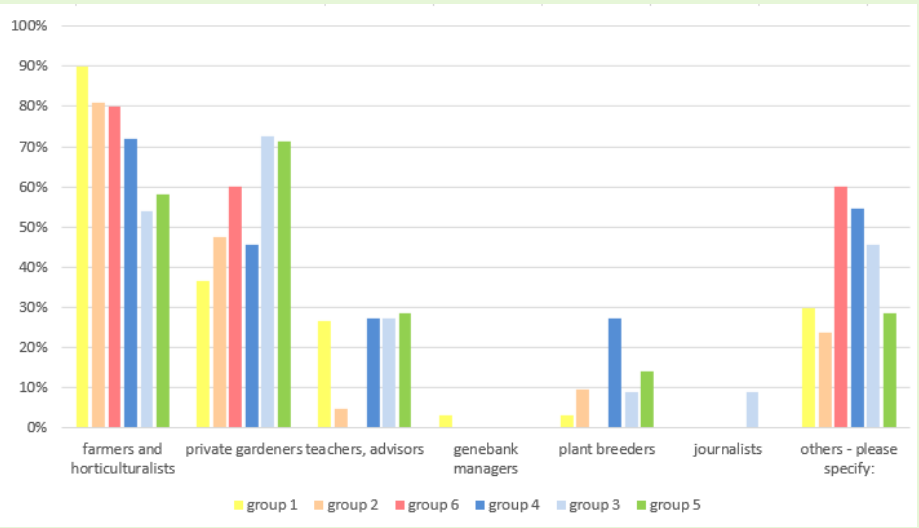


Figure 4 | Founders of CSBs in Europe. The numbers indicate the % of initiatives that chose an answer. Note that groups are not shown in their numerical order here, in order to show the differences better.

That's different from groups 3 and 5 (in Northern & Central Europe and the new member states), where private gardeners as well as other stakeholder groups – e.g. other organisations – seem to have played a more important role.
Apparently the answers proposed in the survey did not cover all aspects: some groups extensively added "other" founders. The Spanish initiatives mainly mentioned technicians and agronomists, in Portugal and Greece, "food activists" and agronomists were named explicitly.

In group 4 (comprising the more recent initiatives in Northern and Central Europe) the answers were quite diverse. Apart from farmers and gardeners, also plant breeders, teachers and advisors were mentioned, as well as people from other backgrounds, e.g. bakers, mayors, scientists and universities, other NGOs or single individuals.

COMPARING REGIONS IN EUROPE AND BEYOND

Vernooy et al in their book on Community Seed Banks (see footnote 2) report many examples in countries of the Global South, where international NGOs or governmental institutions played an important role in initiating or setting up CSBs - either as part of development aid programmes or triggered by humanitarian emergencies.

Different from that, CSBs in Europe root directly in civil society initiatives, sometimes using existing examples as role models. It seems the many "seed savers type" organisations situated in Central and Northern Europe oriented towards seed savers´ exchange organisations in industrialized countries like US or Australia. Initiatives from Western and Southern Europe show more similarities to farmers based CSB movements in the Global South and probably used those as role models.

Some probable reasons for those differences between CSBs in different parts of Europe were discussed during the CSB workshop in Rome as follows.

In the Central and Northern European countries, the industrial agricultural model became dominant soon after the Second World War. The continuity of agricultural practices that were related

[6] Seed Savers Exchange is a non-profit organization dedicated to the preservation of heirloom seeds. Founded in Missouri in 1975, and starting from a network of gardeners interested in preserving heirloom varieties and sharing seeds, it has today 13,000 members and conserves 20,000 plant varieties. www.seedsavers.org/

to the use of locally adapted crops was many times disrupted, leading to a massive loss of genetic diversity[7]. As awareness rose from the late 1970th about the manifold ecological problems caused by modern Western societies, this was the beginning of the ecological movement in general, and also led to citizens´ initiatives aiming to conserve and recultivate the abandoned agricultural diversity. In this context, private gardens and farms served as "economic niches" for crop types that were not sustained by the agricultural market any more. These citizens´ initiatives, different from those in the Global South, did not rely existentially on seed to be able to feed themselves. There was mainly a moral urge behind the activities, the feeling of responsibility for nature and future generations. Therefore, many early CSB initiatives conceived themselves as part of the environmental movement.

In many parts of Southern Europe, small scale agriculture prevailed much longer, and also agricultural crop diversity in the Mediterranean countries is much bigger than in other parts of Europe. Up to now we find a greater continuity of agricultural practices related to the use of locally adapted crops. This makes the situation e.g. in Italy very different from the situation in Germany. Another aspect is the strong historical link between France and African countries, as well as between Spain and the Central and Southern American countries, that seem to have promoted awareness within farmers´ and civil society groups of CSB models in the Global South.

Furthermore, Spain had the highest degree of GMO crop production in Europe during the last two decades, and some initiatives explicitly link themselves to the countermovement to fight GMOs and set up alternatives. Many initiatives have a strong conception of themselves as part of a social movement that aims at changing the current agricultural paradigm. Autonomy and food-sovereignty are central concepts (see chapter 1.3.6),

Foto: La simiente

„GMO free zone Lebrija" - activists of the Spanish CSB initiative „La simiente"

and the search for varieties adapted to organic and agro-ecological conditions is an important motivation to work with local and traditional crops. The economic and climate crises may have been additional triggers for shifting the focus towards self-sufficiency and autonomy and the role adapted crop types can play in this context.

France seems to be in an intermediary position. At least within the French seed network, mainly farmers took the initiative of founding CSBs. The GMO countermovement (GMOs were banned from production in 2008) and the fight for independence from the dominant seed industry were important motivations. Nowadays, more and more private gardeners join the movement[8].

1.3.3 LEGAL FORMS OF CSBS

The initiatives were asked about their legal status; the results are shown in figure 5. Starting from informal grass root networks, many initiatives later chose a legal form and transformed into associations or foundations. In general, most initiatives througout Europe answering the survey adopted a legal form within 5-10 years. Other community seed banks were constituted as projects run by organisations working in the fields of organic agriculture, gardening or biodiversity conservation.

In many EU countries, it is easy and quite normal to found associations, and at least in the past, that brought great ad-

[7] FAO: The State of the World's Plant Genetic Resources for Food and Agriculture. Rome, 1997
[8] Pierre Riviére, Reseau Semences Paysannes—personal remark

vantages in many countries with regard to public funding and legal certainty.

For example, all initiatives of group 3, representing "old" organisations in Northern and Central Europe, adopted legal forms, mainly non-profit associations, but also some limited liability companies and foundations (figure 5).

In Spain (group 1) and France (group 2), ¾ of initiatives are associations or belong to an association. Many local seed networks in Spain are projects run by organisations, in order to provide access to seeds of local, traditional and farmers´ varieties to farmers and gardeners and to raise awareness among them.

In Italy however (group 2), only Rete Semi Rurali reported a legal form – the other initiatives are grouped around single farms[9]. In the younger initiatives in Central and Northern Europe (group 4), more than half of them did not yet formalize.
In group 5, the initiatives in the new member states, 57% belong to a legal entity – either association or foundation - whilst the others are still informal. This might be due to the age of the initiatives. Another factor, as discussed during the workshop in Rome, could be that in some new member states, initiatives face barriers to founding and running associations, or have a certain mistrust for formalizing their organization.

In group 6, initiatives from Portugal and Greece, half of the initiatives are associations – the others are networks without a legal form.

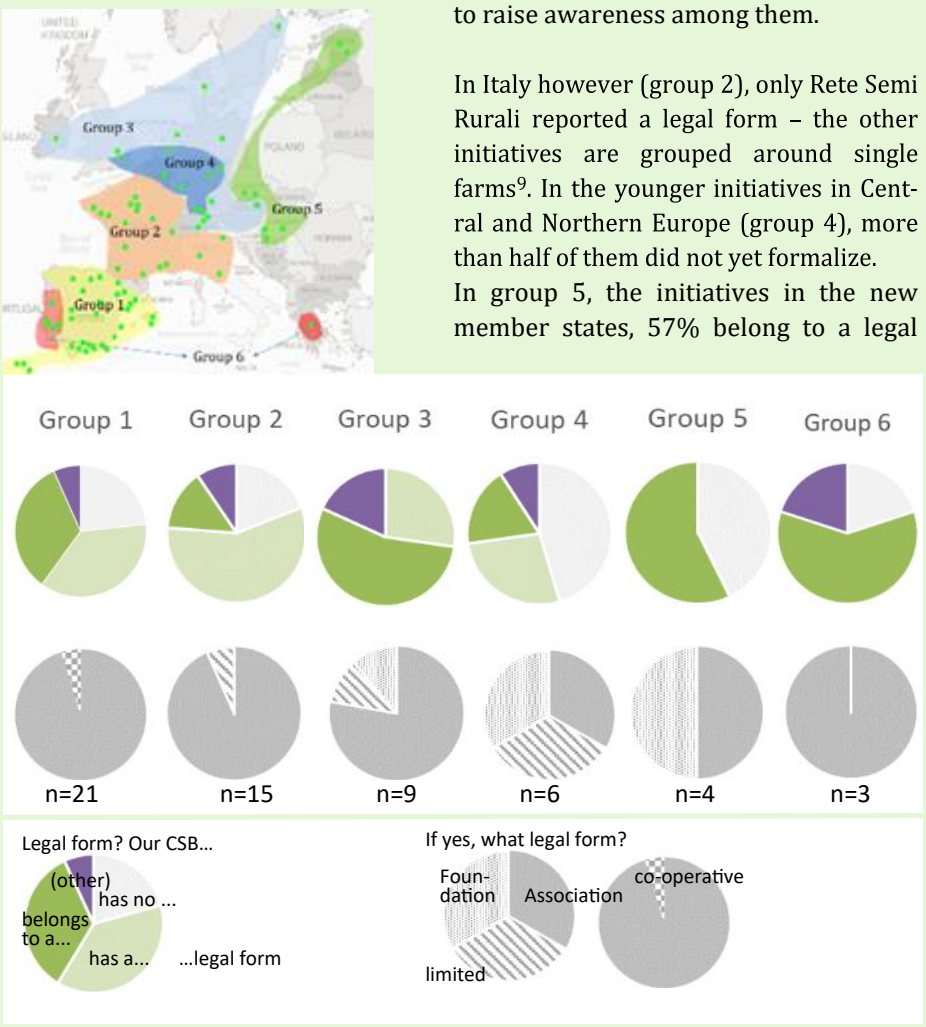


Figure 5 | The charts in the upper row show the answers to the question „Does your CSB have a legal form?". The light green and darker green segments represent the % of initiatives that reported to have, or to belong to, a legal form. The charts in the lower row show the answers to the question „If yes, what legal form?" per group (in absolute numbers; "n" indicated in the chart). Grey: association; striped: limited liability companies; chess pattern: co-operative; dotted: foundation.

1.3.4 MOTIVES AND AIMS AND OF CSB INITIATIVES IN EUROPE

In the survey, the initiatives were asked about their initial motives for founding a CSB, as well as about their main aims today. They could choose from a set of answers and / or could add own answers (see figure 6). The results again show differences between the groups, and indicate an evolution of objectives of the initiatives since their foundation.

Regarding their initial aims, "crop conservation" was very important for most initiatives – but not so much for the French initiatives. Here, many initiatives proposed "other" answers than those provided in the survey, revealing the greater importance of objectives like *crop adaptation*, *crop selection* and *crop production* for those initiatives.

"Other aims" in Group 4 included the creation of a movement of farmers and citizens, the creation of a local seed system, and the registration of varieties in the public domain. In Group 6 "other aims" mentioned were: to restore landraces into contemporary agri-cultural practice in ways that benefit the community, to collect local varieties, multiply and spread them; to be able to provide own seeds for seed production for "up to 300 people", and to serve as an example for others.

[9] Riccardo Bocci, Rete Semi Rurali, personal remark, June 2017

When comparing the motives at foundation with todays´ aims (figure 7), some caution should be exercised for methodological reasons: the set of possible answers was not identical for both questions. Furthermore, the proposed answer *"conservation (similar to a gene bank)"* that was meant just explanatory might have caused reluctance to pick this answer, as "gene bank" is a concept that some initiatives do not identify with.

However, the additional comments in the survey, and furthermore the discussions with representatives of CSB initiatives during the workshop affirm the impression of shifting concepts in CSBs:

The concept of "crop conservation" seems to have lost importance for the farmers´ networks in France, Italy, Spain, Portugal and Greece. Almost half of initiatives in the Spanish group and the main part of initiatives in the French / Italian group did **not pick at all "conservation"** as an aim of todays´ activities, but emphasised on **"sensitisation"** and **"providing samples".**

In Spain, **promoting the use** of the local and traditional varieties that give good results seems fundamental.

„Providing storages or working collections" was rarely mentioned as an aim at foundation of CSBs in Europe. That´s different from many CSBs in the Global South where such needs were important triggers for setting up CSBs. Today however, storages seem important for the Portuguese and Greek initiatives. Especially in the French / Italian group, **"providing pools for own breeding activities"** was mentioned frequently.

Many initiatives built up crop collections over the last years and decades. Those require infrastructure and data management today. The „**provision of data"** ranked high in most groups—however, not in Portugal and Greece, which might be due to a lack of resources.

The seed savers´ organisations in group 3 as well as in group 4, both in Northern and Central Europe, still reported a strong emphasis on „**crop conservation"**. However, looking at figure 8 that shows main activities of CSBs, we see that „**crop improvement and adaption"** also seem to become more and more important for those groups.

Many groups reported "other" important aims than those proposed in the survey.

In the Spanish group, 30% of initiatives wished to add „other aims". Mentioned frequently were aspects like selecting and improving crops, training in seed reproduction to enhance the independence of producers, promoting the use of local, non-hybrid and patent-free varieties, sale and exchange of plant material, and furthermore sensitisation for food sovereignty.

Also in the French / Italian group, 30% of initiatives added „other aims", especially training in the self-production of seeds, mutual help amongst peasants in the region, collective projects and strengthening the social bonds or cooperation with groups from other countries and continents.

In group 3, the old seed savers organisations from Northern and Central Europe (NCE), the following aspects were added: training of members, recovery of traditional crops, research for organic agriculture, and cooperation with other likeminded initiatives.

In group 4, the more recent initiatives in NCE, training of seed multipliers and promoting artisanal seed production, exchange of know-how, promoting the utilization of traditional crops in local markets, and advocacy activities were mentioned explicitly.

In group 5, the new member states, only one „other aim" was mentioned: awareness raising.

60% of initiatives from Portugal and Greece (group 6) wanted to specify their aims by adding own answers. They emphasised on training of seed multipliers to provide seeds for local food production; developing plant varieties adapted to local organic production, utilizing the benefits of locally adapted genetic resources. Another important aim mentioned was to inspire other people to become active in seed multiplication and exchange.

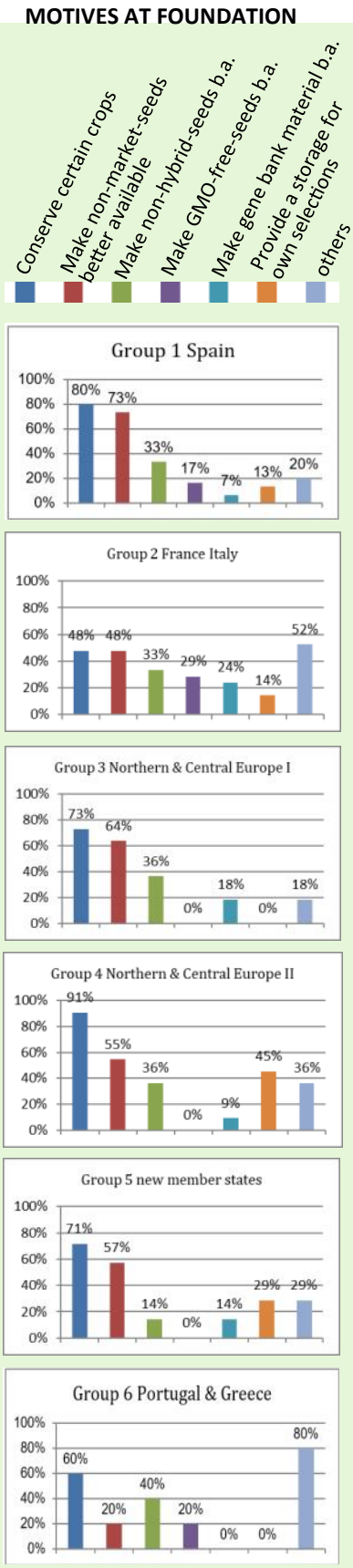


Figure 6 | When your community seed bank was founded - what were the main motivations?

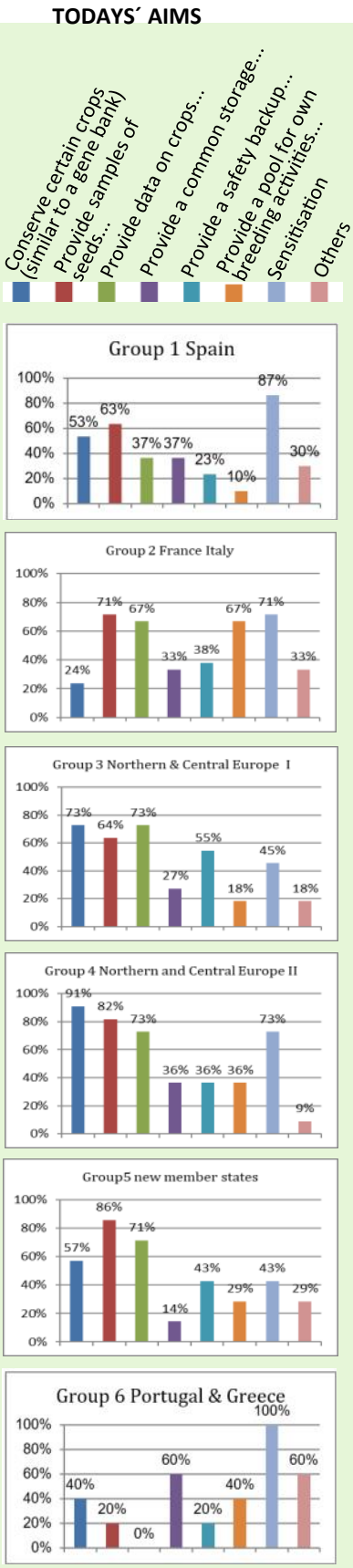


Figure 7 | What are the main aims of your community seed bank today?

% of initiatives in a group that chose an answer

1.3.5 MAIN ACTIVITIES OF EUROPEAN CSBS

In addition to aims and motives, the initiatives were asked about their concrete activities (figure 8). We can generally assume that the number of different activities reported has not only to do with different concepts, but also with the age and the available resources of the initiatives. **"Education and training"** were the activities scoring high in all groups. **"Multiplication of seeds"** and **"providing seed samples"** were other activities reported in most groups—though to a lesser extent in the Portuguese/Greek CSBs and the new EU member states initiatives. Apart from those main activities, we find some specificities in each group:

Providing farmers with seeds seemed more important for group 1 than for other groups.

Group 2 (French/Italian CSBs) reported a strong emphasis on breeding activities; whereas providing storage facilities ranked quite low.

In group 3, seed savers organisations from Northern & Central European, database management was sticking out—it was mentioned by 100% of initiatives. Characterisation and evaluation of accessions and, in group 3, participatory plant breeding were reported frequently.

Group 4, the more recent initiatives in Northern & Central European, displayed a broad range of different or complementary activities. Crop improvement was sticking out.

Group 5 – initiatives in the new member states - showed a clear focus on storage, multiplication and providing seeds.

Group 6 – Portugal and Greece - reported similar to group 5. Database management, crop improvement and breeding were not mentioned in this group.

Figure 8 | What are the main activities of your CSB? From a list of proposed terms as many answers as appropriate could be picked. The numbers indicate the % of initiatives that chose an answer (compared to all initiatives in a group).

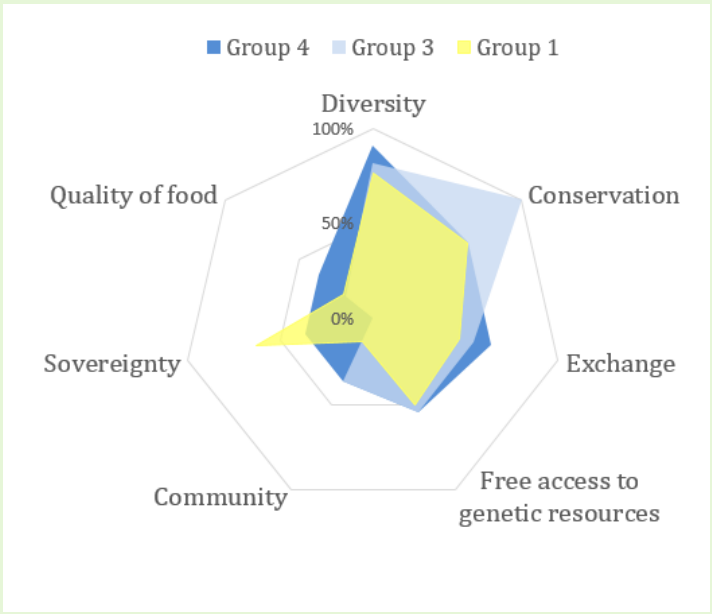
1.3.6 IMPORTANT TERMS WITH REGARD TO VALUES AND CULTURE IN CSBS IN EUROPE

From a long list of terms describing values, culture and concepts in their CSBs, **all initiatives chose "diversity" as the most important term.**

In figure 9, the answers are shown in two separate charts. The chart on top shows three groups (1, 3, and 4) that picked „conservation" as important term – with group 3, the seed savers organisations from Central and Northern Europe, sticking out, of which 100% of initiatives chose „conservation".

"Sovereignty" was another important term for the Spanish group.

The chart below shows groups 2, 5 and 6. For all of them, „conservation" was of minor importance. In the Portuguese / Greek group 6, 0% of the initiatives picked "conservation". Looking at the peaks, there was a strong emphasis on „community" in this group. "Exchange" scored highest in the French/Italian group.



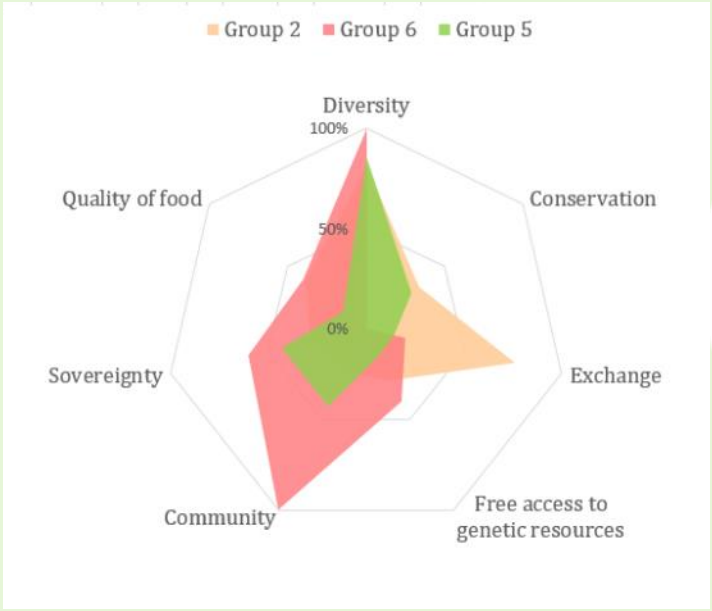


Figure 9 | What are important terms with regard to values and culture in your CSB?A list of terms was proposed of which max. 5 answers could be chosen. If the proposed terms were not perceived appropriate, participants were free to provide their own terms. The numbers indicate the percentage of initiatives that chose an answer (compared to the total number of initiatives in a group).
List of proposed terms: *Community, Culture, Commons, Conservation, Diversity, Economic viability, Exchange, Experiment, Free access to genetic resources, Health, Independence, Individualism, Partnership, Personal Contact, Private sphere, Quality of food, Reciprocity, Respect and esteem towards certain persons, Respect for nature, Self-Sufficiency, Sovereignty, Tradition, Use, Volunteering & Engagement.*

1.3.7 STAKEHOLDERS OF CSBS AND INTERACTIONS

In order to get a more detailed picture of the main stakeholder groups for the CSB initiatives and their interactions, participants in the survey were asked to fill in a matrix (figure 10). The results are shown in figures 11 to 13. To analyse the data, the total numbers of reported interactions were put in relation to the number of participants per group, thereby creating relative numbers that could be used to compare the groups.

Stakeholders

Looking at the stakeholder groups, we see that—in general—**interactions with farmers and horticulturalists as well as with private gardeners** were mentioned most frequently (figure 11).

Comparing the six groups (figure 12), **groups 3 and 2 generally seemed to be the „most interactive" groups.** The French / Italian Group 2 displayed exceedingly high interactions with producers and also high interactions with scientists. Group 3, the seed savers organisations from Central and Northern Europe on the other hand, reported interactions with many different stakeholder groups. In groups 4 (Northern and Central Europe) and 5 (new member states), there were more interactions with private gardeners than with producers. Sticking out were also interactions with schools in group 6, initiatives from Portugal and Greece, and the seemingly high importance of the employees in this group.

Some initiatives mentioned "other stakeholders" apart from those proposed in the matrix; thereby completing the list of important stakeholders for CSBs and correcting the assumptions of the survey. Important supplements were:

- other networks and organisations
- bakers (mainly in France)
- consumers
- professional seed producers
- Museums
- community gardens
- the general public.

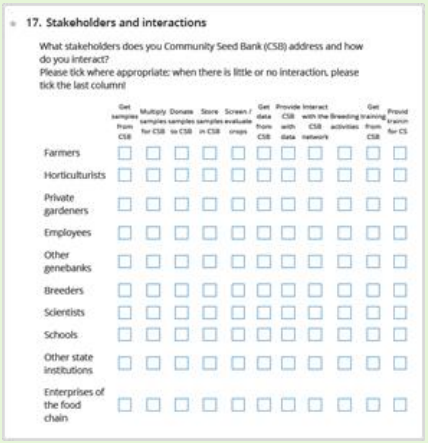
Interactions

Looking at interactions, **receiving samples from CSBs, multiplying and providing samples for CSBs, being trained by CSBs**, or interactations within the network were mentioned most frequently .

Apart from those main interactions, we found again the high importance of evaluation and data exchange in the French / Italian group 2 and in group 3, old seed savers organisations from Central and Northern Europe. In the same groups, breeding activities played a major role. In the Greek / Portuguese group 6, interactions within the network seemed to be quite intensive.

Special rights and reciprocity

40-50% of the initiatives in all groups reported to have reserved certain rights or service for members or participants that are actively engaged in the CSB. Mainly access to seeds (or other plant parts used for propagation), as well as access to data are privileged for or restricted to those special groups. For some, but not all groups, „reciprocity" in the exchange of seeds was an important guiding principle behind these rules .



17. Stakeholders and interactions

What stakeholders does you Community Seed Bank (CSB) address and how do you interact?
Please tick where appropriate: when there is little or no interaction, please tick the last column!

	Get samples from CSB	Multiply samples for CSB	Donate samples to CSB	Store samples in CSB	Screen / evaluate crops	Get data from CSB	Provide CSB with data	Interact with the CSB network	Breeding activities	Get training from CSB	Provid trainin for CS
Farmers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Horticulturists	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Private gardeners	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Employees	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other genebanks	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Breeders	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Scientists	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Schools	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other state institutions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Enterprises of the food chain	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Figure 10 | Matrix of Stakeholders and Interactions from the survey. In addition to the proposed answers, other stakeholder groups and interactions could be added.

Proposed stakeholder groups were:

- Farmers
- Horticulturists
- Private gardeners
- Employees
- Gene banks
- Breeders
- Scientists
- Schools
- Other state institutions
- Enterprises of the food chain
- Others (please specify).

Proposed interactions were:

- Get samples from CSB
- Multiply samples for CSB
- Donate samples to CSB
- Store samples in CSB
- Screen / evaluate crops
- Get data from CSB
- Provide CSB with data
- Interact with the CSB network
- Breeding activities
- Get training from CSB
- Provide training for CSB
- little or no interaction
- Others (please specify).

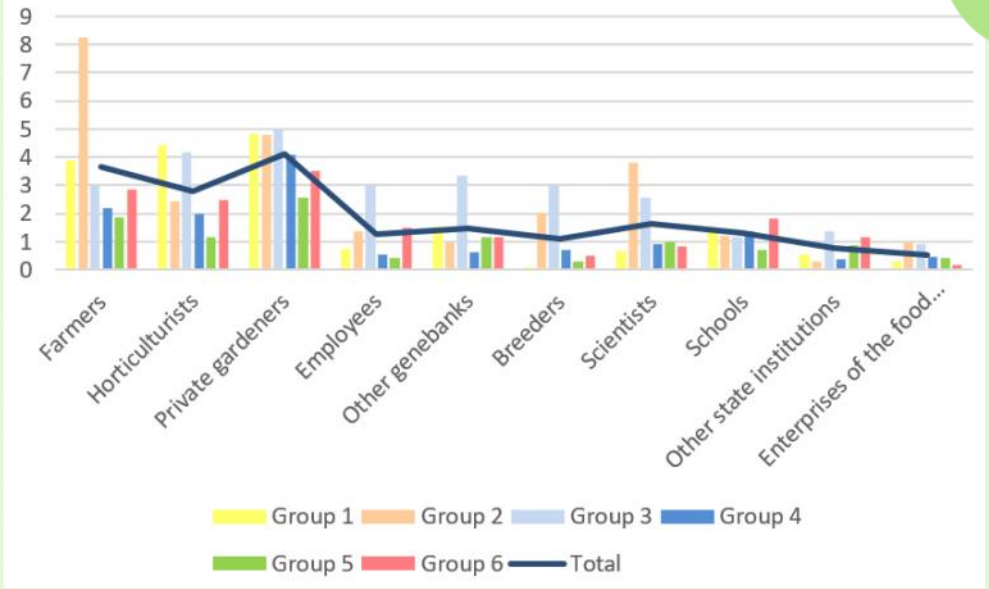
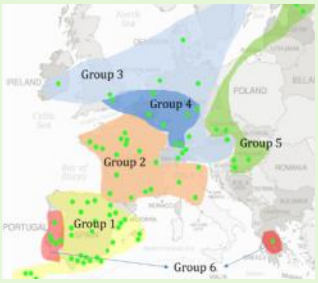


Figure 11 | Relative number of interactions per stakeholder group



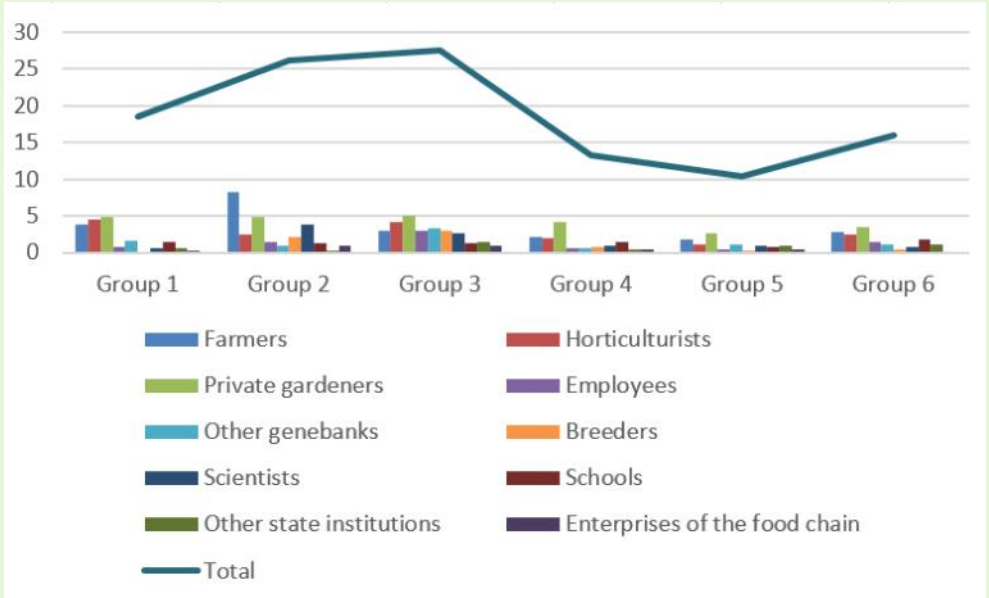


Figure 12 | This figure uses the same data as figure 11, but groups them along the survey groups

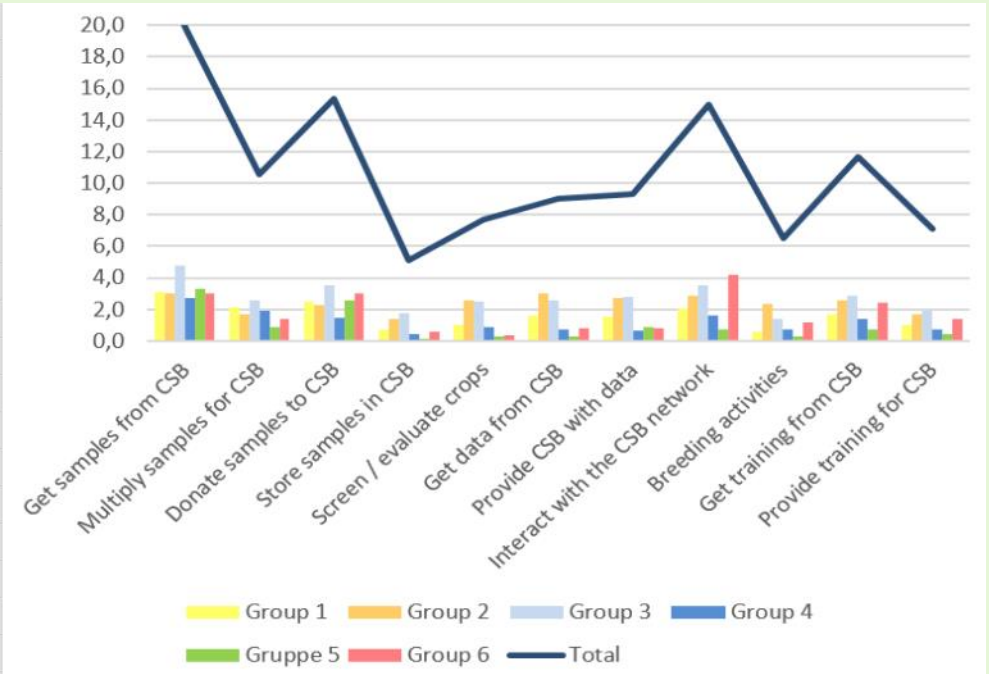


Figure 13 | Relative numbers of different types of interactions

1.3.8 PLANTS IN THE CSBS

Community seed banks in Europe cover most crops. Some are specialized in few crops, others cover many. Altogether, CSBs report that they maintain cereals, potatoes, oil seed, leafy vegetables, fruiting vegetables, tuber vegetables, legumes, herbs, fruit trees, vines, nuts, ornamentals, and wild plant.

Seeds, bulbs, trees...

Figure 14 shows that seeds are most common in the CSB initiatives that participated in the survey. As mentioned above, it was not an explicit decision to focus on seeds in the survey, but of course the term Community „SEED" Banks led to a selection within initiatives. In principal, there is no reason to exclude initiatives working with e.g. fruit trees in a collective manner. Indeed, some initiatives with a strong focus on fruit trees participated in the survey. Addressing such initiatives more proactively would probably have had an impact on the results of the survey.

seeds	81
bulbs and tubers	27
field collection (e.g. perennial or non-generative)	23
trees shrubs berries	23
crafts	10
others, please specify:	5
tissues	0

Figure 14 | What plant propagation material[9] do you keep in your CSB? The chart shows the answers of all CSBs in absolute numbers.

Plant groups

Looking at plant groups (figure 15), prominent crops in all groups are **legumes, leafy and fruiting vegetables, cereals, herbs and maize**. Groups 3 (seed savers´ organisations) and 5 (initiatives in the new member states) generally reported most different plant groups. The importance of cereals seems highest in groups 2 (France and Italy) and 3; maize in groups 1 (Spain) and 6 (Greece and Portugal). Group 6 also frequently reported wild plants and ornamentals.

Primary sources & categories

Asked about the primary sources of plants managed by CSBs, answers from all groups show a similar picture (figure 16): The most important sources of seeds and other plant parts for propagation are the founders and members of the CSBs themselves, and the farmers, gardeners and breeders with whom they exchange their plant resources. Gene banks served as another useful source for plants managed in CSBs. The main part of plants can therefore be described as "local and farmers´ varieties" (figure 17).

[9] In the survey questions, we used the terms „plant propagation material" and „breeding material" as those expressions are commonly known. „Material" however reflects a reductionist approach does not not fit the more holistic approach chosen in DIVERSFIOOD. We therefore replaced the term „material" by other terms like e.g. „plant parts used for propagation" throughout the report .

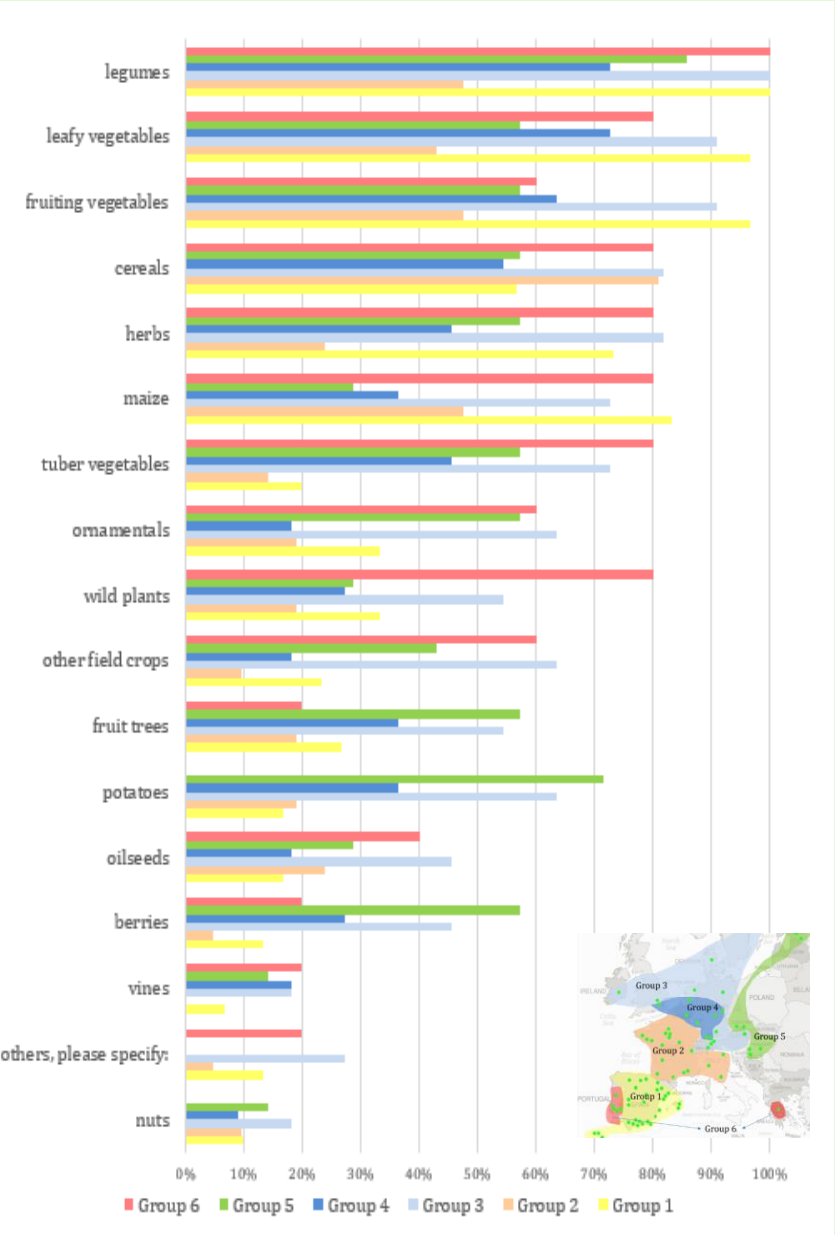


Figure 15 | What are the groups of plants that you keep in your CSB? The numbers indicate the % of initiatives that chose an answer (compared to all initiatives in a group).

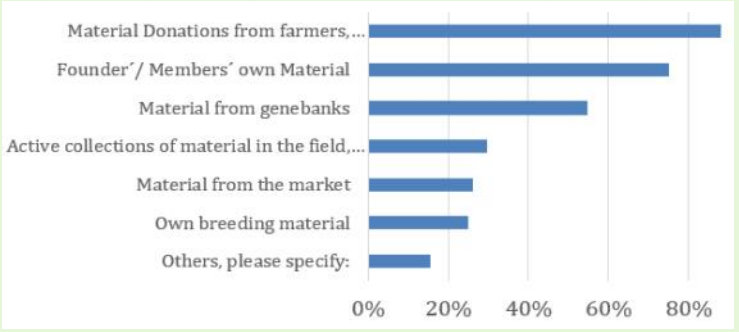


Figure 16 | What were the initial sources for plant material in the Community Seed Bank? The numbers indicate the % of initiatives that chose an answer.

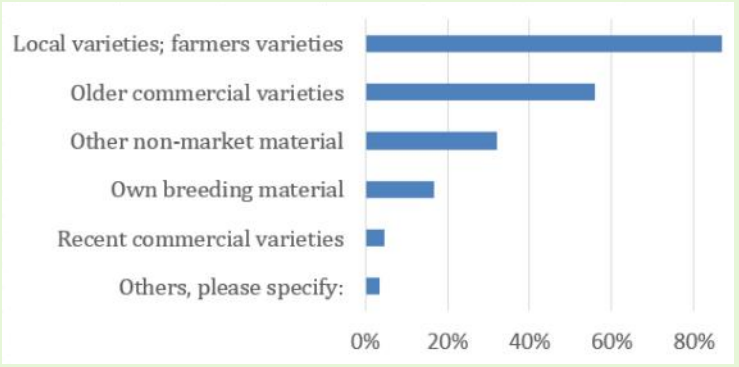


Figure 17 | Under which categories does the main part of samples in your Community Seed Bank fall? The numbers indicate the % of initiatives that chose an answer.


Foto: Pro Specie Rara


Foto: Círculos de Sementes

Sample numbers

With regard to sample numbers, most initiatives in the Spanish and French/ Italian groups (1 and 2) as well as in the groups from northern and central Europe (groups 3 and 4) manage 100 to 1000 different samples (figure 18). In the Greek/Portuguese and the New EU Member state initiatives (groups 6 and 5) 1 to 100 different samples are typically managed. In group 3, seed savers organisations from Central and Northern Europe, some initiatives are pointing out that manage more than 1.000, up to 10.000 samples. None of the initiatives reported more than 10.000 samples in their CSBs.

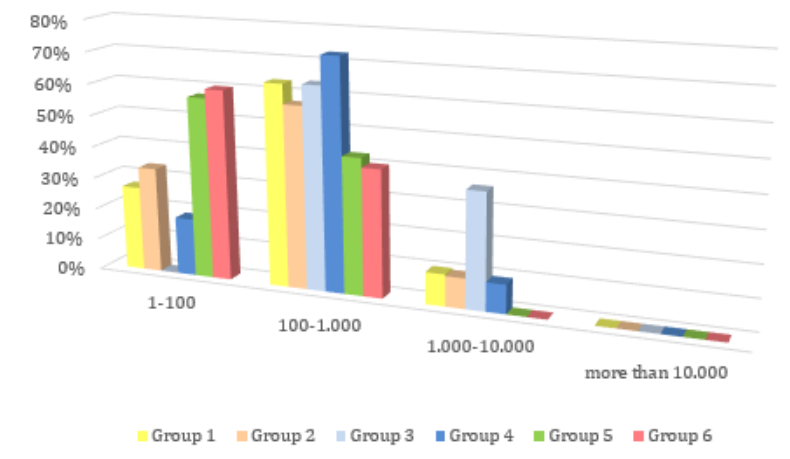


Figure 18 | Number of samples kept in CSBs. The numbers indicate the % of initiatives that chose an answer (compared to all initiatives in a group). “Samples” means different accessions, lines or varieties.

Sample size

With regard to sample size, most initiatives report to work with rather small sample sizes in the sense that the main part of the harvest is going back to the CSBs. Stakeholders are provided with small samples only (figure 19).

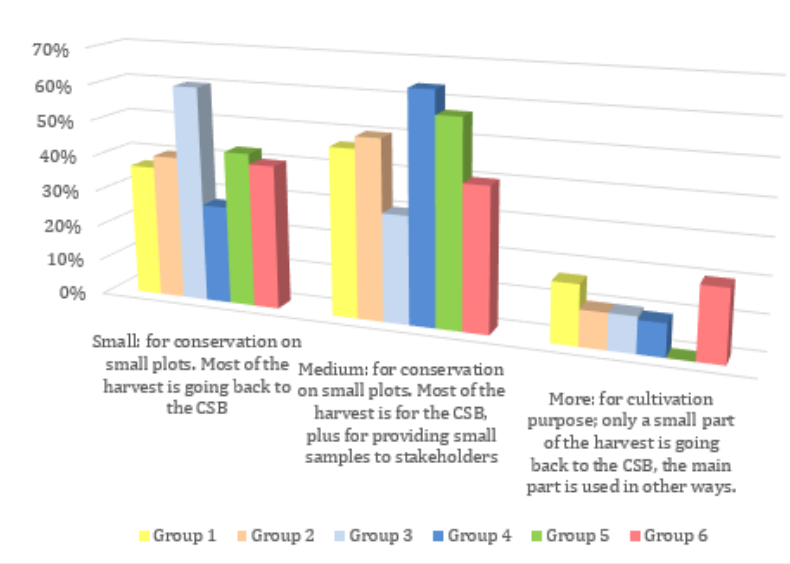


Figure 19| How big is the usual sample size, or, in case of field collections, the usual population size in your CSB? The numbers indicate the % of initiatives that chose an answer (compared to all initiatives in a group).

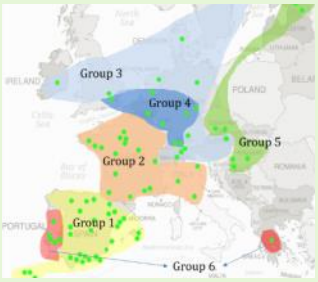



Foto: ZMAG


Foto: Heritage Seed Library


Foto: Arche Noah

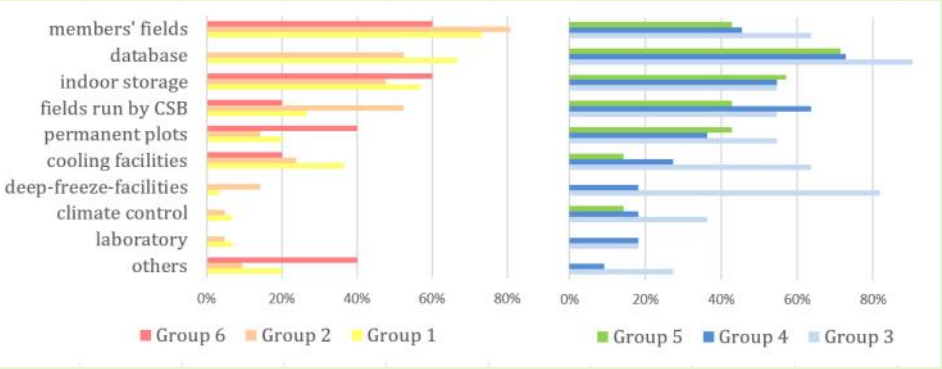


Figure 20 | What infrastructure supports your CBS? Chart on the left: the «southern» initiatives. Chart on the right: the «northern» initiatives. The numbers indicate the % of initiatives that chose an answer.

1.3.9 INFRASTRUCTURE AND MANPOWER CSBS RELY ON

The initiatives were asked about the infrastructure supporting their CSB. Members´ fields play an important role in groups 1 (Spain) and 2 (France and Italy), (figure 20). The use of databases for the data management of the seed banks has been reported by 100% of initiatives in group 3. More than half of initiatives in all other groups use databases, apart from group 6 (Portugal and Greece), where no database use has been reported.

Approximately half of the initiatives in all groups rely on indoor storage facilities for their seeds. Cooling facilities and deep-freeze facilities seem to be frequently used in only in group 3 (seed savers organisations from Central and Northern Europe) and, to a lesser extent, in group 1 (Spain). Generally, initiatives in group 6 from Portugal and Greece seem to rely on least technical infrastructure, initiatives in group 3 seem to rely on most infrastructure.

With regard to manpower, in the average European CSB it is mainly volunteering members that are involved in the everyday work (figure 21). Sticking out is group 3, seed savers organisations from Central and Northern Europe, that reports high average numbers of actively engaged members. However, we have to bear in mind the very high total numbers of members in this group—there are some organisations with thousands of members (figure 22).

CSBs in Europe on average rely only to a very limited extent on own paid staff – though there are of course some exceptions.

For some groups, other supporters than staff and members play an important role. In the Spanish group, farmers who multiply seeds or are involved in the seed exchange, but also students and volunteers were named. The French / Italian group mentioned

Figure 21 | How many individuals are involved in running your Community Seed Bank each year? Average numbers reported for own staff, members and other persons per group.

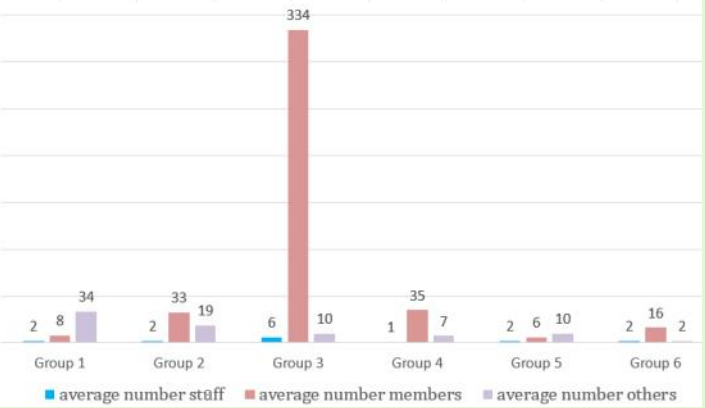


Figure 22 | How many members does your CSB have? The chart shows the average numbers reported per group. Group 1 reported from 0 to 500 members, group 2 from 0 to 800, group 3 from 10 to 11.500, group 4 from 0 to 150, group 5 from 0 to 150, group 6 from 9 to 1000.

mainly volunteers, people from extension services, producers and other partners; trainees were mentioned in group 5 (initiatives in the new member states).

1.3.10 FINANCIAL ASPECTS OF COMMUNITY SEED BANKS

Most initiatives in the Spanish group 1, in groups 5 and 6 (initiatives in the new EU member states, in Portugal and Greece) have estimated yearly costs of less than EUR 1,000, whereas in the French / Italian group 2, around 80% of the initiatives have a yearly budget of from 1,000 to 100,000 EUR (figure 23). In group 3, the early seed savers´ organisations, we find the biggest range – from initiatives with a very small budget, to one CSB with a budget of more than 1 Mio EUR per year.

There is a broad spectrum of sources used to finance CSB activities (figure 24). All initiatives earn some own income – for group 5, the initiatives from the new EU member states, these seem exceedingly important.

Comparing membership fees and private donations, groups 1 and 2 rely very much on their members, groups 4 and 6 more on donations, in groups 3 and 5 it is balanced.

Public money plays a greater role for the French/Italian and the Spanish group, whereas funds and donors are more relevant for groups 3 and 5.

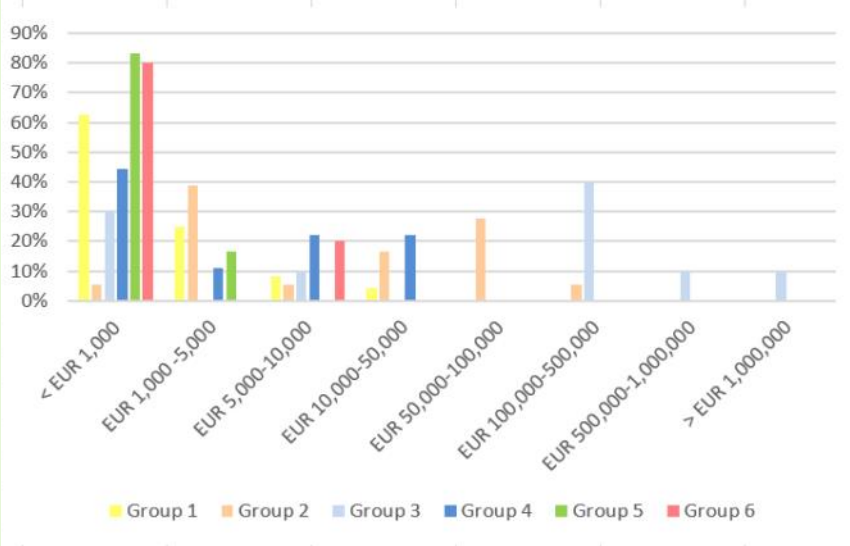


Figure 23 | What are the estimated yearly costs for running your Community Seed Bank? The chart shows the average numbers reported per group.

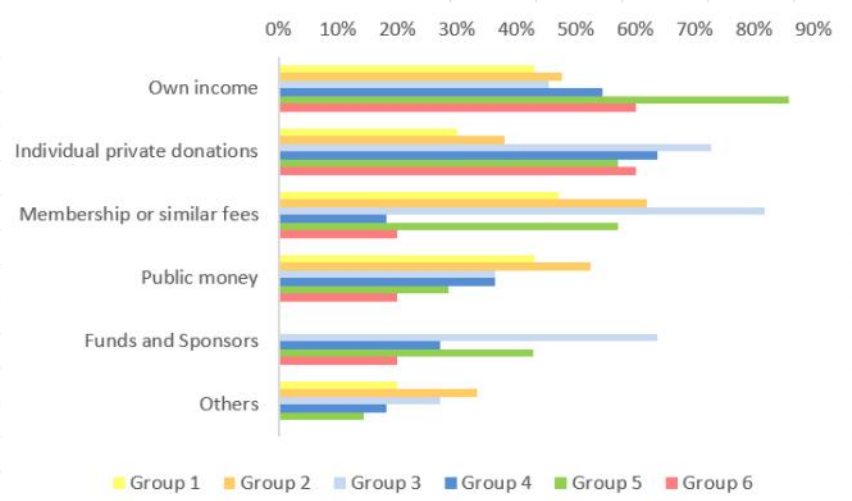
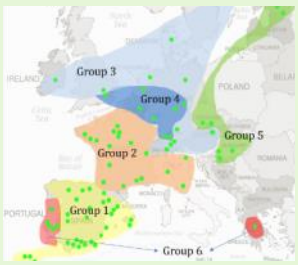


Figure 24 | What are the sources used to finance your Community Seed Bank? The chart shows the average numbers reported per group.



1.3.11 GOVERNANCE IN CSBS

Governance structures in initiatives and organisations depend on several aspects - the chosen legal form, but also the group size, the phase of the organisational development from pioneer stage to functional differentiation, and last not least social concepts and values in the groups. Therefore, in young initiatives and small groups that did not (yet) form a legal entity one may expect that collective decisions and decisions taken by those who are involved in the work prevail. In bigger and older organisations with a legal form, more differentiated governance levels to provide checks and balances are likely to be found.

The initiatives were asked: "Who decides on what in your Community Seed Bank?" and filled in a matrix (figure 25).

The results are shown in figure 26: In the Spanish group 1, group sizes are rather small, and therefore need strong involvement of members in the everyday management of the CSBs, but little formalized governance structures. "Those who are engaged in the work" are those who decide; but there are also some associations in this group, board and general assembly play a role with regard to general objectives. Management structures have little importance.

In the French / Italian group 2, the picture is comparable, but the board level is more important here. In group 3, seed savers organisations from Central and Northern Europe, we see an even stronger shift from decisions by "those who are engaged in the work" to the board and the general assembly when it comes to general objectives. Also the management level is more pronounced here.

In group 4, the more recent initiatives in Northern and Central Europe, less than 20% are organized as associations, therefore general assemblies do not play an important role. It is a quite heterogeneous group, therefore the answers do not show a clear picture.

In group 5, the initiatives in the new member states, the distinction between "general objectives" – decided by the general assembly – and "activities" – decided on by the active community – is very clear.

In group 6, initiatives from Portugal and Greece, the concept of "collective decisions" is rather pronounced, as well as delegation systems. Board and management levels however seem not to play an important role.

38. Who decides on what in your Community Seed Bank?

Hier klicken, um den Einleitungstext der Frage zu bearbeiten

	On general objectives	On activities	On internal rules	No
A Collective	☐	☐	☐	☐
Those who are enaged in the work	☐	☐	☐	☐
A General Assembly or delegates	☐	☐	☐	☐
The Board	☐	☐	☐	☐
The Management	☐	☐	☐	☐

Figure 25 | "Who decides on what in your CSB?". To check one box in each row was mandatory – at least the column "no" if no others answer was applicable.

		On general objectives	On activities	On internal rules	No relevance
Group 1 Spain	A Collective	21%	21%	16%	42%
	Those who are enaged in the work	28%	34%	31%	7%
	A General Assembly or delegates	27%	24%	22%	27%
	The Board	24%	17%	20%	39%
	The Management	6%	12%	9%	74%
		On general objectives	**On activities**	**On internal rules**	**No relevance**
Group 2 France, Italy	A Collective	24%	26%	21%	29%
	Those who are enaged in the work	26%	36%	29%	10%
	A General Assembly or delegates	30%	20%	20%	30%
	The Board	33%	29%	29%	10%
	The Management	10%	5%	10%	76%
		On general objectives	**On activities**	**On internal rules**	**No relevance**
Group 3 Seedsavers in North. & Central Europe	A Collective	8%	15%	8%	69%
	Those who are enaged in the work	19%	43%	33%	5%
	A General Assembly or delegates	29%	29%	18%	24%
	The Board	39%	26%	30%	4%
	The Management	30%	25%	25%	20%
		On general objectives	**On activities**	**On internal rules**	**No relevance**
Group 4 Recent init. in North. & Centr. E.	A Collective	29%	7%	14%	50%
	Those who are enaged in the work	19%	44%	19%	19%
	A General Assembly or delegates	9%	0%	0%	91%
	The Board	27%	13%	13%	47%
	The Management	27%	13%	13%	47%
		On general objectives	**On activities**	**On internal rules**	**No relevance**
Group 5 New EU member states	A Collective	20%	20%	10%	50%
	Those who are enaged in the work	25%	33%	25%	17%
	A General Assembly or delegates	29%	0%	0%	71%
	The Board	33%	0%	22%	44%
	The Management	10%	20%	20%	50%
		On general objectives	**On activities**	**On internal rules**	**No relevance**
Group 6 Portugal, Greece	A Collective	25%	50%	13%	13%
	Those who are enaged in the work	31%	38%	31%	0%
	A General Assembly or delegates	40%	0%	0%	60%
	The Board	0%	17%	17%	67%
	The Management	0%	20%	0%	80%

Figure 26 | The initiatives were asked: "Who decides on what in your Community Seed Bank?" and filled in the matrix shown above. It was mandatory to check at least one box in each row – if not applicable, participants were asked to check "no relevance". NCE: Northern and Central Europe.


Foto: Circulo de sementes

1.3.12 ACHIEVEMENTS AND CHALLENGES

Achievements

Community seed banks from all groups report that they consider their **main achievements in the areas of training, education and awareness-raising** (figure 27). Involvement and participation are other achievements reported quite frequently. To look at the differences, only groups 1, 3 and 4 consider the conservation of rare crops a major achievement. This could either mean that conservation is not an important objective in these groups, or that it is a goal, but could not yet be achieved sufficiently.

Sticking out is that especially the French / Italian group 2 reports achievements in crop improvement, whereas in group 3 with seed savers organisations from Central and Northern Europe, achievements in the field of political advocacy rank quite high. CSBs as social innovations have only been picked by groups 2 (France & Italy) and 6 (Portugal & Greece). Only very few initiatives consider that their achievements are with research, product innovations and economic success.

Barriers

With regard to barriers, the answers show a quite homogeneous picture (figure 28). The lack of financial resources poses a major barrier for most initiatives, and especially groups 1, 4 and 5 struggle with a lack of manpower – that's probably those initiatives operating with small numbers of individuals. 40% of all initiatives consider the legal environment as obstructive, with a peak in the Portuguese / Greek group. Between 20-40% of initiatives report lack of technical resources, and lack of land (see peak in group 4, the more recent initiatives in Northern and Central Europe).

Strenghts to overcome barriers

Initiatives were furthermore asked what they consider their greatest strengths to overcome barriers (figure 29). It was an open question and the reported answers were grouped. The answers show that the enthusiasm, the engagement and the endurance of the people involved are considered very important, as well as the shared visions and values, the feeling of group power and collective action. Solidarity and friendship are central values, especially in groups 1 and 2. Successful awareness raising and the resulting public acceptance of CSBs aims and activities is considered supportive. In addition, Group 4 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.

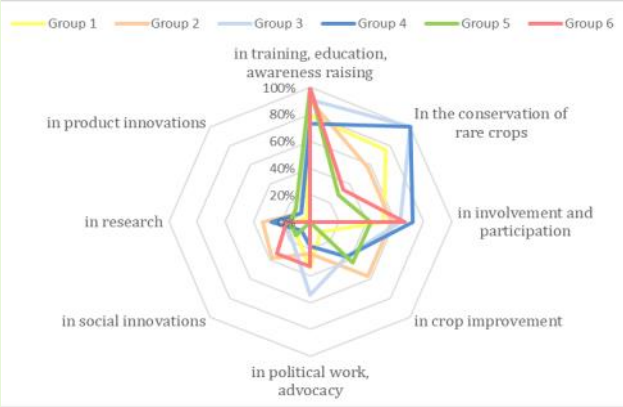


Figure 27 | Where do you see the most important achievements of your CSB? Participants could choose max. 5 from a set of nine proposed answers or add own answers. The numbers indicate the % of initiatives that chose an answer (compared to all initiatives in a group)

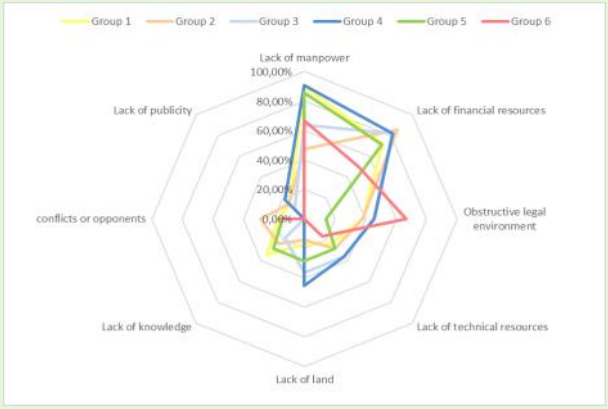


Figure 28 | What do you consider the greatest barriers for reaching your objectives? The participants could choose max. 5 from a set of nine proposed answers or add own answers. The numbers indicate the % of initiatives that chose an answer (compared to all initiatives in a group)

Figure 29 | The initiatives were asked:
"What do you consider your greatest strenghts to overcome the barriers you face?" (open question)

1.4 CONCLUSIONS: CSBS IN EUROPE ARE DIVERSE

The survey carried out in the context of the DIVERSIFOOD project shows the great diversity of CSB initiatives in Europe. Different triggers lead to their foundation, different needs and role models resulted in different aims and approaches, social structures and thematic scopes. CSBs in Europe that participated in the survey are aged from 0 to 42 years; about ¼ of initiatives are working as informal networks, others have transformed into associations, foundations, cooperatives and even limited liability companies. Though most of them are non-profit entities, there are some exemptions. Not all of the community seed banks work with *seeds*, not all of them have seed *banks*, and the *communities* comprise of few to more than 10.000 members, which of course results in differences of available resources, but also of governance structures.

Figure 30 tries to summarize and give an overview of the characteristics of each group. Of course, CSB initiatives in Europe are too divers to fit into a single scheme. Studying the differences can however trigger reflection and learning. The aim of this exercise is therefore to develop a better understanding of existing differences, why they developed and in how far they are, or were, functional under their special circumstances. It shall serve as an input for reflection and support the CSBs in their further development. This said, it should be added explicitly that the aim of this exercise is not to assess the different characteristics, or claim that the picture shown represents all existing initiatives. Neither should it seduce us to look at it as a static reality.

CSBs are dynamic social structures that will develop further. We can see this also when comparing the "aims at foundation" and the "todays´ aims" of CSBs as we did above. Today, society as a whole faces big challenges – climate change, digitalisation and changing political environments that may impact on the role of civil society structures. The existing CSBs and also the newly starting initiatives will have to find answers to these challenges – how can they become resilient, and what shall be their specific contribution to the society as a whole? The answers to these questions will however depend on the concrete socio-economic, political and natural environments they are situated in. One size does not fit all, existing models will change and new models will emerge, and adaptable and suitable models will have to be found for the diverse situations.

However, CSBs in Europe have already done a very good job so far. They succeeded in raising public awareness for the importance of crop and seed diversity, in safeguarding local varieties and bringing them back into use, in adapting them to todays´ needs, in capacity building, in creating solutions for very practical problems, and in disseminating these experiences that are so crucial for the functioning of these initiatives. They have enriched society with their innovations. Thereby they contribute to making our food system more sustainable and our society more resilient and prepared for the challenges we are already facing.

	Group 1 **Seed Networks in Spain**	Group 2 **Farmers´ Networks in France and Italy**	Group 3 **Early Seed Savers´ Organisations in NCE (I)**	Group 4 **More recent Initiatives in NCE (II)**	Group 5 **Seed initiatives in the new member states**	Group 6 **Seed Networks in Portugal and Greece**
Founding period	From 1995, thereof **72% from 2005**	From 1995, thereof **84% since 2005**	**70% before 1990**	From 1995, thereof **80% since 2005**	From 1995, thereof **82% since 2005**	From 2000 thereof **80% since 2005**
Legal form	**70%** with legal form, mainly associations, all not for profit	**68%** with legal form, mainly not for profit associations, few ltds.	**82%** with legal form, mainly assoc., few foundations, all not for profit	**50%** with legal form – associations, ltd. and foundations	**50%** belong to a legal entity – e.g. association, museum… all not for profit	**50%** with legal form, all not for profit associations
Countries	ES	FR, IT	Northern and Central Europe: AT, DE, DM, CH, LI, NL, IR, GB, SE	Northern and Central Europe: AT, BE, DE, DM, NL, LU, GB	EE, HU, HR, CZ	PT, GR
Founders	**producers** private gardeners, teachers, agronomists, facilitators	**Producers** private gardeners	**private gardeners,** producers many others (teachers, breeders, journalists…)	**private gardeners,** producers group with highest amount of plant breeders	**private gardeners,** producers many other backgrounds (teachers, breeders…)	**producers** private gardeners, food activists" and agronomists
Triggers and role models mentioned?	farmers based CSB movements in Global South as role models; GMOs as trigger	farmers based CSB movements in the Global South; GMOs as trigger	Seed savers´ organisations in the US, Canada and Australia	Other CSB organisations in Europe mentioned	Other CSB organisations in Europe mentioned	farmers based CSB movements in the Global South; GMOs and economic crisis as triggers?
Average number of members	70	100	1,800	40	30	200
Average yearly budget for CSB	<1,000-5,000	1,000-100,000	1,000-1,000,000	1,000-50,000	< 1,000	< 1,000 (-10,000)
Important sources for financing	Membership fees, public money own income	Membership fees public money own income	Membership fees, individual private donations, funds and sponsors	individual private donations public money own income	Own income Membership fees, indiv. private donations, Funds, sponsors	Membership fees own income
Network versus organisation	Network of more than 40 regional and local CSB initiatives	Network of more than 40 regional and local CSBs & umbrella org.	Typically one to few organisations per country with "networks within"	one to few initiatives and organisations per country, no national networks	one to few initiatives and initiatives per country, no national networks	one to few initiatives and organisations per country, no national networks
Main aims reported*	Sensitisation and training Providing seeds Conservation Crop adaption	Sensitisation and training Providing seeds Providing data Providing breeding pool Social co-operations	Conservation Providing data Providing seeds Providing a safety backup	Conservation Providing seeds Providing data Sensitisation and training	Providing seeds Providing data Conservation	Sensitisation and training Adapted seeds for local production
Main activities reported*	Seed multipl., storage of seeds, provide stakeholders with seeds, training and education	Training and education, participatory plant breeding seed multipl., provide stakeholders with seeds, breeding new populations	seed multipl., Characterisation database management, training and education, evaluation of accessions, provide samples seed storage	seed multipl., provision of seeds, training and education seed storage database management	Training and education, seed multipl., storage of seeds, provide stakeholders with seeds	Training and education, seed multipl., storage of seeds providing stakeholders with seed samples

	Group 1 **Seed Networks in Spain**	Group 2 **Farmers´ Networks in France and Italy**	Group 3 **Early Seed Savers´ Organisations in NCE (I)**	Group 4 **More recent Initiatives in NCE (II)**	Group 5 **Seed initiatives in the new member states**	Group 6 **Seed Networks in Portugal and Greece**
Main initial seed sources	Donations from farmers, gardeners and breeders					
Categories of plants	local and farmers´ varieties, Gene bank accessions, older commercial varieties	local and farmers´ varieties. Gene bank accessions, older commercial varieties **own breeding lines and populations**	local and farmers´ varieties. Gene bank accessions; older commercial varieties, **active collections**	local and farmers´ varieties. Gene bank accessions; older commercial varieties	local and farmers´ varieties. Gene bank accessions, older commercial varieties, **field collections**	local and farmers´ varieties. **Own breeding populations and lines, field collections**
Typical accession numbers	100-1000	100-1000	100-1000 (5.000)	100-1000	1-100, max. several hundred	1-100, max. several hundred
Important crop groups	Maize Vegetables Legumes Herbs	Cereals Maize Vegetables legumes	Cereals Vegetables Legumes potatoes other field crops big range	Cereals Vegetables legumes	Legumes Potatoes vegetables	Maize Cereal Vegetables Legumes wild plants ornamentals
Important infrastructure	Indoor storage members´ fields databases	Indoor storage members´ fields fields run by CSB databases	Cooling and deep freeze facilities Databases indoor storage members´ fields CSB run fields permanent plots	CSB run fields indoor storage databases	indoor storage databases members´ fields CSB run fields permanent plots	Indoor storage members´ fields permanent plots
Manpower / average number of individuals involved in managing CSB	5-50	30-50	350	30-50	5-20	5-20
Average number of members	70	100	1,800	40	30	200

Figure 30 | Overview of the answers from the initiatives that participated in the survey on CSBs in Europe – comparison between six groups

Figure 1 |

Country	Ex situ seed-conservation system	National biodiv. Coordination platform	NGO involved in national conservation system?	Biodiversity Management strategy?	Access to PGR ex situ restricted or easy	Seed quantity	Interaction between gene banks and private seed companies?	Interaction between NGO and seed comapnies
Italy	Decentralized ex situ system.	Yes: PlantRes is a national network that involves all the actors. 29 Research Centres and Rete semi Rurali as the only NGO and NPO.	No But formal interactions with ministry of agric.	Yes	Easy with sMTA	Enough for research not for direct use	Not known	Not known only with Arcoiris
Switzerland	One CH-gene bank	Yes: The Swiss commission for the conservation of cultivated plants (CPC-SKEK).	Yes with SKEK	Yes	Easy with sMTA	Enough for research not for direct use	Only a few known. E.g. Delley seeds and plants ltd	With some CH-organic seed companies
Austria	Several gene banks run by regional and federal institutions	No: Only for fruits	No	Yes, but not satisfying	Easy with sMTA	Enough for research not for direct use	not involved in a national biodiv. management system.	With some Austrian organic seed companies
Spain	Decentralized national seed bank network	No: Only local collaboration	No	No	Easy with sMTA	Enough for research not for direct use	Not known	With some micro-enterprises
France	11 public gene-banks for different species	Yes: CTPS = French Permanent Breeding Technic Committee	Yes with CTPS	Not yet	Supposed to be easy, sMTA, No access to private-public collections e.g. Maiz	Enough for research not for direct use	Yes through CTPS	With artisanal microenterprises
Norway	NordGen and Norwegian Genetic Resource Centre	No:	No	Yes	Easy with sMTA	Enough for research not for direct use	Only a few known: Graminor and Solhatt	?
Cyprus	One centralized national gene-bank	No:	No	No	Easy with sMTA	Enough for research not for direct use	Not known	?

2. DIVERSIFOOD RESEARCH ON NATIONAL SEED – NETWORKS IN EUROPE

BÉLA BARTHA, PRO SPECIE RARA[1]

Here the outcomes of the DIVERSIFOOD research about different national community seed diversity management systems of the five DIVERSIFOOD CSB actors in Spain, Italy, France, Austria and Switzerland were presented[2].

In the research, the legal environments in which the different CSB initiatives operate were examined. CSB actors provided an overview of their involvement in and connections with the formal seed system and the plant genetic resource conservation system.

It could be shown that the CSB actors are mainly influenced by national seed laws, the International Treaty for Plant Genetic Resources in Food and Agriculture and by phyto-sanitary aspect that they have to integrate in their daily business work.

Figure 1 gives an overview of the reported situations. All EU Member states have signed the International Treaty on PGRFA, hence committing to realise Farmers' Rights related to PGRFA following Article 9 of the Treaty, have implemented EU directives such as those on conservation varieties and provide better access to the seeds stored in gene banks.

However, in most countries CSBs reported from there is no shared formal space or platform for all stakeholders, formal and informal, institutional or civil society-based, to discuss and negotiate PGRFA issues. When there are communication platforms on PGRFA-issues, large scale seed or food actors often prevail and the views of civil society organizations are not taken into great consideration.

[1] www.prospecierara.ch

[2] The whole report is available here: http://www.diversifood.eu/wp-content/uploads/2018/03/Diversifood_innovation_factsheet_10_Management_systems.pdf

3. PRESENTATIONS OF CSB INITIATIVES IN EUROPE

3.1 ARDEAR AUVERGNE-RHÔNE-ALPES EN FRANCE[1]

CHRISTIAN DALMASSO

Founded in 1985, ARDEAR Rhône-Alpes is a network of peasants who participate, alongside the Confédération Paysanne, in the implementation of concrete alternatives for an environmentally friendly farming. Its objective is to maintain a living countryside and to provide peasants with decent living conditions.

ARDEAR has been a member of the association "Reseau Semences Paysannes" for twelve years. With regard to CBSs activities, the main focus is on cereals. ARDEAR motivates farmers to engage in seed saving to gain autonomy, for a further development of peasant farming, and seed security. There are six farms in the network that organise collections, each with about 100 varieties. 50 farms are part of the network that manage smaller numbers of varieties. ARDEAR is covering a large area, which makes it difficult to bring people together. However, each July before the harvest ARDEAR organizes farm visits, in September seed swaps called "harvest meetings" are popular. A strong focus lies on participatory plant breeding, and most farms work with populations, not landraces. ARDEAR has a strong political vision to see the crop selection in farmer's hands again. The goal is to recreate biodiversity on the farms. The varieties in their collection serve as basis for their work. Important part of their work is training, as there are many young farmers in the network are looking for training on seed saving. Indeed, ARDEAR is targeting people who are starting farms. Another important group are baker farmers, therefore tasting events with bread from own populations play a major role during the meetings. For ARDEAR, the social dimension of the work is very important, to break the isolation of farmers that, from ARDEARs point of view, has come with agricultural industrialisation.

Question: Is growing cereal populations financially viable without procession of the products on the farm? Answer: All farmers process their cereals and do not sell them directly. Of course there is some interest from bigger actors on the market, but the farmers didn't make the step yet. When this happens, economic questions will arise.

Question: Where did the farmers first get the seeds from? Answer: From other farmers, public gene banks from France and other countries.

Question: How is the work financed? Answer: ARDEAR has half an employee who is funded by regional funds.

Question: Is there a central cereal collection? Answer: No, there is no centralized seed bank. It is assumed that with decentralized collections, the risk to lose accessions can be better managed.

[1] www.agriculturepaysanne.org/rhone-alpes

3.2 FÉDÉRATION RÉNOVA IN FRANCE[2]

BRIGITTE BOITEL

Fédération Rénova is conserving fruit tree varieties in the south of Toulouse. It all started 20 years ago with some passionate people who realized that the fruit tree diversity disappeared and specific knowledge was lost. Orchards were abandoned whilst newcomers had difficulties to start with fruit culture because of lack of available land.

Fédération Rénova started with programs to conserve orchards and trees. Fruit tree multiplication is of course different from propagation of annual crops. For those fruit species that do not reproduce true to form, vegetative propagated by crafting has to be carried out.

Main activities of Fédération Rénova are awareness raising, but also the practical work of re-cultivating, cutting and planting of trees. The characterization and description of varieties is also important, as many variety names of fruit species like chestnuts are lost.

Another focus lies on the valorisation of the fruit harvest. Ten years ago, Fédération Rénova was able to set up a transformation laboratory and more recently a peeling facility for chestnuts. They are consulted by people who want to start an orchard with regard to processing, nurseries, and financing. People from Fédération Rénova see themselves as social entrepreneurs, engaging also unemployed persons in their work. They have made the experience that only to rely on volunteers brings not enough sustainability to the organisation. Fédération Rénova is also active in the field of political advocacy and research.

3.3 IL FAGIOLO MAGICO IN ITALY[3]

ALICE PASIN

Il Fagiolo Magico is a seed savers´ and gardeners´ network. Alice Pasin is landscape architect, she lives at Lago di Como. She renovated an old house with organic materials, clay and straw, situation in a garden, surrounded by a forest. On their farm they grow vegetables and ornamentals and are hosting visitors. Alice takes care of seed propagation, and also teaches seed saving. The forest protects some crop against hybridization, but animals like boars and roes are a big issue that she learnt to cope with in protecting the vegetable garden. Alice and her network grow cereals, the harvest is done with a small combine. Sheep are left to graze on the rye fields in first spring. Their seedbank is kept in the house in a wardrobe. Alice wrote books about seed production and about wild ways of gardening, now she wants to take part in agricultural fairs and to organise trainings and markets, but sale of her own seeds is a legal grey zone.

[2] https://renova.arize-leze.fr/

[3] Facebook: fb: Il fagiolo magico. email: paesin@hotmail.com

3.4 AZ. AGRICOLA VILLA ROCCA / CONSORZIO QUARANTINA[4]

FABRIZIO BOTTARI

Consorzio Quarantina is active in the mountainous region of Liguria and mainly works on potatoes. There is a lot of abandoned land in Liguria, and mainly old farmers remain; the young people are moving from the hinterland to Genoa or other coastal cities. "Quarantina" is the name of a potato variety, meaning "40 days". Consorzio Quarantina collected (the last) local potato varieties and founded a network. Farmers who live higher over sea level produce the seed potatoes. That's important to keep the tubers virus free.

Today, the association has a collection of 400 potatoes. In the international year of the potato, the Consorzio started training activities, by going to schools and fairs with their collection. In 2011, another exceptional project was started: true potato seeds. After seven years of selection, common efforts resulted in a new variety called "Rubra Spes"(red hope). It is based on "Quarantina", but more resistant to mildew, and also more productive. This variety is now being distributed to other farmers.

3.5 COLTIVARE CONDIVIDENDO IN ITALY[5]

JOHANNES KEINTZEL

Coltivare Conividendo is based in Belluno in the Dolomites. The organisation was founded in 2007. It is conserving varieties – mainly of wheat, maize and beans - and offering training and practical courses. Groups for participatory plant breeding have been started, meeting on a monthly basis to exchange their experiences. Each year, three major events take place: In spring it is all about seed and plants exchanges. The second meeting takes place after the wheat harvest. In the last week of November seed savers gather in a big seed exchange festival. In 2017, Coltivare Conividendo was founded as a non-profit association.

3.6 THE GARDEN ORGANIC HERITAGE SEED LIBRARY IN THE UK[6]

CATRINA FENTON

Garden Organic Heritage Seed Library (HSL) was established in the late 1970s, as an answer to the concern of losing many heirloom varieties due to the changes in European seed legislation. The concept of heirloom varieties is somewhat unique for the UK: those are seeds grown by families for more than 50 years. The Heritage Seed Library includes mainly heirlooms, but also former commercial as well as historic varieties. The headquarters are situated at Garden Organic in Coventry where 800 varieties are stored and cultivated there. Half of the seed produced is grown on site; the rest is grown by volunteer seed guardians. The HSL can rely on several polytunnels for isolation, seed cleaning facilities and cold storage. Cross fertilizing plants must be hand pollinated or pollinators introduced. Characterization of accessions is based on the UPOV set of criteria, along with other evaluations such as taste tests.

Due to the seed market legislation in the UK, Garden Organic cannot sell their seeds, but the 6000 members can choose six free packets of seeds from an annual Catalogue, which each year includes around 150 varieties to choose from. In the UK, there are at least 80 seed swap events organised every year. There are community seed banks of different sizes; the Land Workers´ Alliance runs one of the largest, to the smallest on the Shetland islands, which is a box on a shelf.

Questions: Are you monitoring to who receives seeds from HSL? Answer: When the recipients are members, Garden Organic knows where the seeds go. 99% of


Foto: Agricola Villa Rocca


Foto: Coltivare condividendo


Foto: Heritage Seed Library


Fotos: Aegilops

[4] www.quarantina.it/
[5] http://coltivarcondividendo.blogspot.com/
[6] https://www.gardenorganic.org.uk/hsl

the seeds are grown in the UK. One of our future aims is to know more about how the different varieties grow in the different regions.

Question: Is it open source seeds? Answer: Mainly yes, members can access these varieties through our seed catalogue and save their own seed. We distribute seed to around 40 seed swaps and community events each year, and provide resources and training on how to save seed. When varieties in the collection become registered and commercialized we no longer need to conserve them.

Question: Do you have a quality control in place for those varieties that are propagated sustained by volunteers or farmers? Answer: Yes, we provide characterisation sheets to all of our growers so that they can monitor quality and ask for information about how they have produced seed e.g. population size, isolation method.

Question: How is HSL financed? Answer: Mainly from membership fees and donations, but seed guardians are volunteers. Only crops that are difficult to propagate are multiplied on contract.

3.7 AEGILOPS IN GREECE [7]

RALLITSA TSINGOU

Aegilops is active in different parts of Greece, and also on the Greek islands. There are several CSBs in Lesvos (cereal, vegetables), Athens (aromatic herbs, ornamentals), Kefallonia (vegetables), Patra (cereal, vegetables), Kastoria (fruit tree, vines), Volos (cereals, vegetables), and a research and organic breeding center (Lotus ORF).

Their aim is to build farmers´ groups, and to stimulate participatory plant breeding in order to create alternative sustainable food systems. "We need good seeds and good products and to promote them, so that the farmers can live from these activities." Yes, conservation is an important concept, but only with a dynamic component.
The organisation of seed exchanges is an important activity. Aegilops has a strong focus on cereal. Data for all accessions are collected - on sources and origin, on history, but also on the use, the organoleptic and agronomic characteristics. The data management is based on excel files. The time for digitalising all the data is a limiting factor, and a simple and user friendly database is a quite urgent need. Such a database would have to be able to integrate data from participatory processes and farmers´ experiences as well as results from scientific research, to integrate both in a holistic approach.

In general, Aegilops aims to record all activities and exchanges. Research questions are addressed whenever possible - for example, research on the changes of traits over time. Such information is very important for the members.

Aegilops tried to register single local varieties of farmers that gave their seeds to gene banks. This turned out very difficult, but would be important to be able to exchange greater amounts of adapted seeds between farmers. To involve farmers in a successful registration would be a real asset for the farmers, because the seed can then be made available. With regard to legal issues, there is a lively cooperation with Peliti, the second large seed network in Greece.

Apart from cereal, Aegilops has some activities on perennials as well - for example fruit trees, where they have set up a mother nursery for apple and pear local varieties and rootstocks trying to evaluate their adaptability to organic farming conditions, tolerance to diseases and insects, appearance and quality.

Social issues that Aegilops has to deal with in their daily work are the different cultures, even within the same region, when creating CSBs. Sometimes, there are big gaps between traditional farming regions on the one hand and very touris-

[7] www.aegilops.gr

tic places on the other hand. Looking at it along the food chain, it is important to link both.

Question: How did you start to involve farmers? Answer: Many of us are agronomists, and we get in contact via personal relations, seed exchanges, but also the local media or farmers fairs are important platforms to make our aims and activities known. In the PPB activities, we have agronomists involved with a background in breeding for organic agriculture. PPB in our context means mainly selections.

3.8 THE DANISH SEED [8] SAVERS FROESAMLERNE

GERT POULSEN AND SIMON VON SIEBENTHAL

The Danish Seed Savers "Froesamlerne" and their 900 members aim at conserving and collecting germplasm of domesticated plants since their foundation 30 years ago. In the Danish climate that is ideal for seed production, a strong seed industry established that led to the complete disappearence of artisanal seed production. To revive it is one of the aims of the Danish Seed Savers.

Gert Poulsen has a background in the Nordic Genbank and joined the Danish Seed Savers after his retirement. "Our garden is our seed bank" is an important motto – the multiplication and collection of information on accessions is carried out in gardens in a traditional way. The seed collection was built from findings from old gardens and from the wild, but also with help of public calls. The Danish Seed Savers have set up 13 crop groups, each managed by a coordinator, and run a crop adaptation program. Database is of course a big issue also for the Danish Seed Savers. They collaborate with Eurisco, NordGen and Svalbard.

In summer 2016, NordGen announced that it could no longer afford to distribute seeds to private citizens, and suggested the establishment of a so called User Gene Bank (UGB). The Danish Seed Savers try to play an active role in this process to influence the development of the UGB. They fear a worst case scenario of a private profit company taking over seed production and outsourcing it to a cheap country where growth conditions are very different from those in Denmark, thus spoiling the germplasm. Danish Seed Savers made a proposal on how to start a user gene bank that unfortunately has been refused.

The Danish Seed Savers aim at raising public awareness for plant genetic resources trough PR activities, and to provide information at markets and fairs, lectures on seed saving, seed swop events and "seed pop-ups". They organize public meetings on specific subjects like the National Programme on plant genetic resources, or to mobilize against patents on seeds. Seed policy advocacy and international collaborations are other important pillars to achieve their mission.

In their recent projects, DSS focus on the rediscovery of old Danish pulses, and portrait old vegetables varieties that are rediscovered and conserved in a web portal of Danish food plants

3.9 RED DE SEMILLAS "RESEMBRANDO E INTERCAMBIANDO" (SPAIN)[9]

MARÍA CARRASCOSA

The Seed Network "Resowing and Exchanging" (Red de Semillas "Resembrando e Intercambiando"-RdS) is a decentralized organization with a technical, social and political dimension that has been active for the last 18 years. It's an association that brings together more than 20 local seed networks throughout Spain.

The main objectives of this national coordination are the reintroduction of local, traditional and farmers' varieties

Foto Danish Seed Savers

Foto Red deSemillas REI


Foto Red deSemillas de Euskadi

[8] www.froesamlerne.dk
[9] www.redsemillas.info

in the agri-food system, in the framework of the concepts of agro-ecology, food autonomy, small scale production and short supply channels. Other aims are the coordination of activities amongst the different local seed networks and promoting their participation on national and international level.

Local seed networks that are members of RdS are formed by farmers and farmers´ organisations, gardeners, technicians and facilitators, university staff and students, supporters of responsible consumption, local action groups, activists of the ecologist movements, researchers and all kinds of individuals that are interested to develop an alternative agri-food system.

In order to achieve their objectives, most initiatives have developed local CSBs – in order to promote access, production and exchange of seeds among farmers, support and facilitate conservation and use by farmers, raise public awareness about the importance of agricultural biodiversity in the agri-food system, and promote local, traditional varieties amongst consumers.

The skills and tools needed to manage the different CSB initiatives are promoted in different training activities organised by RdS at a national level.

Some of the initiatives participated in the two international Workshops held in Rome.

3.10 RED DE SEMILLAS DE EUSKADI / EUSKAL HERRIKO HAZIEN SAREA (SPAIN)[10]

JOSEBA IBARGURENGOITIA GASCÓ

In 1996, farmers and agronomists formed the Seed Network of the Basque country (Red de Semillas de Euskadi / Euskal Herriko Hazien Sarea, RSE). Important triggers were the GMO threat, but also difficulties in accessing seeds of local varieties. The current main objectives of RSE are to conserve the cultivated biodiversity of the region, to provide seeds and crop data to different interested groups, and to build a network of seed guardians for the multiplication and characterization of local and traditional varieties.

Localised in the Basque country, this local seed network that is a member of RdS manages a CSB operating from the Botanical Garden of Olárizu.

The new entrances in the CSB results from ethnobotanical research activities in the region, or are directly provided by farmers and other stakeholders. The varieties are classified with regard to their documented age: As “adapted varieties” if they are known since at least 30 years and as “old varieties” if they are known for more than 60 years. Currently, there are 128 varieties of 32 species registered in the database of the CSB. There are three different collections: the base collection, the active collection and the educational collection.

The CSB is managed by RSE staff and by volunteers. The collaboration with the Seed Guardians is based on a written contract and, of course, on mutual trust. The main activities of the CSB are seed exchanges and training visits to the seed bank. An important aim for the future is to improve the database and the infrastructure of the seed bank, as well as to enhance the conservation protocols and the manual for the seed guardians. The consolidation and stabilisation of the network of guardians is another major goal. Public awareness needs to be enhanced further, and last but not least, stable funding is a major issue.

[10] www.haziensarea.org

3.11 RED DE SEMILLAS DE GRAN CANARIA (SPAIN)[11]

ESTHER GONZÁLEZ BRAVO

The Gran Canaria Seed Network is embedded in the ecological agriculture association "Tierra Fértil" and it´s a member of RdS. Important objectives are the promotion of agricultural biodiversity and the fostering the use of local varieties. Tierra Fértil make seed loans and donations and organises seed exchanges. Another aim is to improve the information on the characteristics and the use of local varieties.

The CSB was created five years ago. A group of mainly farmers and other people related to organic agriculture on the island gathered a seed collection. This collection was based on their own seeds, as well as on donations and exchanges with farmers of Gran Canaria and other Canary islands and seed networks and on a donation from the Council of Gran Canaria from a prospection project.

Currently the CSB has around 80 users. About 20 members give support with their yearly fees, although the most active members are those that form the board of directors. There are many additional cooperations with volunteers and other supporters.

With regard to crops, cereals (mainly wheat), legumes (mainly beans) and vegetables are most important. Currently there are about 300 varieties in the CSB. Important activities of the CSB are the organisation of seed fairs and seed exchanges and loans. It is encouraging to see that also professional organic farmers use those seeds. This should be broadened. Raising awareness about the importance and benefits of using local varieties is an important issue, as well as basic training on seed multiplication and conservation for farmers and others.

For the future, a project of seed multiplication and variety characterization is planned with the Council of Gran Canaria. To link local varieties and professional farmers in the area, to find more collaborating farmers, to reactivate the seed loan and exchange systems are the most important next steps. The overall goal is to enhance autonomy based on agricultural biodiversity.

3.12 RED ANDALUZA DE SEMILLAS "CULTIVANDO BIODIVERSIDAD" (SPAIN)[12]

PAULA LÓPEZ

The Seed Network of Andalucia (Red Andaluza de Semillas "Cultivando Biodiversidad"-RAS) was created in 2003 and is a very active member of RdS. This group is open and multidisciplinary and is formed by farmers, consumers, gardeners, agronomists, organic farming associations, community gardens, ecologist movement and people and groups working on food sovereignty.

RAS´ CSB came into life in a meeting in 2007 were members of the organisation decided to set up a tool within the organisation (the CSB) for farmers to access and exchange seeds of local varieties. RAS´ CSB is called *Resowing and exchange network* (Red de Resiembra e Intercambio – ReI). The participation in the ReI is free, there is no fee to pay, but it is not essential to be a member of RAS. The only condition to participate is to share self-produced seeds of local varieties. Around 800 private persons and 100 legal persons – e.g. organisations – have participated in the ReI since its creation.

The general purpose of ReI is to promote the use and consumption of traditional varieties from the region. This shall be achieved by enabling and strengthening the exchange of seeds and the contact between interested persons.


Foto Red Andaluza de Semillas

[11] www.tierra-fertil.es
[12] www.redandaluzadesemillas.org

The ReI also advises the creation of provincial and/or regional CSB and networks, and carries out training and dissemination activities for farmers as well as gardeners and consumers.

The ReI database is a central management tool in order to document and track varieties, exchanges and participants in the CSB. There is a public inventory of all accessions in the CSB provided online that participants can check in order to ask for seeds. Since 2007, 2,753 cultivars of 168 plant species have passed through the ReI. During 2017, more than 52,500 seed samples have been exchanged through the CSB among more than 110 people and groups. The ReI prepares and provides documentations and descriptions of the accessions in the database. This information is often generated by common actions involving members of the RAS, like multiplication and characterisation, assessment of the qualities of local varieties and sharing this information within the network.

What are challenges and plans for the future? To reach more farmers who want to exchange seeds, to broaden the information and knowledge about the characteristics and uses of the varieties that enter the ReI, and to increase the knowledge about seed propagation of the members of the ReI. Financial resources are still a limiting factor, so more volunteers are needed to involve in the management of the ReI, specially in running the data base. Also technical resources have to be enhanced in order to improve the conservation of seeds (e.g. cooling facilities).

To expand the collaboration with community gardens could create helpful synergies. More awareness raising activities, especially for young people and children, are an important investment in future impact. To continue collaboration with gene banks should enforce for the introduction of local varieties in the ReI.

3.13 ASOC. SUBBÉTICA ECOLÓGICA (SPAIN)[13]

JOSE LUIS GRANADOS

Subbética Ecológica is an association of producers and consumers, located in the region of the Subbética in Andalusia. It´s a member of RAS. The CSB is run with the contributions of thirty farmers. There are additional seed exchanges within the network, as well as a cooperation with the provincial agricultural department and some community urban gardens in the province. The members are both professionals and amateurs. There are usually two major exchanges meetings per year, but of course there are also seed exchanges in the rest of the year. The bank is physically located in the headquarters of the association.

The philosophy and objectives are to keep alive the legacy of the grandparents and grandmothers, and to work for free seeds that are adapted to the local environment and climate. The aim is to offer special flavour to consumers; flavours that are linked to the regional food culture. Subbética Ecológica manages around 40 varieties: various types of lettuce, tomatoes, spinach, purple carrot and others. Maintaining good seeds in order to enhance independence from the seed industry is a big challenge. Continuous selecting is important. The most difficult plant group with regard to seed quality in our region are the crucifers.

For the future, Subbética Ecológica wishes to maintain and strengthen the activities. As a medium-term project, the group wants to develop a concept of “collective sowing” to be able to cope with the barriers resulting from the organic certification. The plan is to dedicate a common space in one of the sites that will be specialized in the production of seedlings from own seeds in order to supply the producers in the association.

[13] www.redandaluzadesemillas.org/red-de-resiembra-e-intercambio-177/

3.14 LA SIMIENTE (SPAIN)
AURORA SÁNCHEZ

Based in Lebrija, a city in Andalusia, the main objectives of "La Simiente" are to spread agro-ecological practices, to promote biodiversity and the recovery of seeds of local varieties and the connected peasant knowledge. Lebrija declared a GMO-free zone and the defense of Food Sovereignty, intercultural dialogue and Gender Equality are other important aspects of the non-profit organization. La Simiente is a member of RAS and is formed by 20 people taking decisions collectively. Their activities are related to education, training, awareness raising and dissemination; addressing professional producers, but also amateur and volunteers about health, quality and origin of food, seed production, traditional knowledge and the environmental health issues.

For the seed multiplication, collaboration with the Cooperativa "La Verde" of Villamartin and the Cooperativa La Reverde de Jerez are very important. La Simiente organises two annual seed exchanges, workshops on seeds and tasting panels, also for and with school children. The group manages to finance its activities completely from private donations.

3.15 ALMAJARACA (SPAIN)
DAVID MARTOS POZO

The trigger for the foundation of Almajaraca was the observation that local varieties well known in the region were vanishing at an alarming speed. Almajaraca is an association of farmers, processors and consumers of organic products. Almajaraca therefore aims at maintaining varieties of traditional vegetables of the northern zone of the province of Almeria – though the activities are not restricted to the local crops, but encompass also crops of other origins that are adapted to the local conditions. Main crops are fruiting vegetables like tomatoes, peppers and aubergine, followed by cucurbits, brassicas, alliums, beans, corn and faba bean.

Almajaraca operates in a region with a still large amount of small scale farms and little industrialisation of agriculture. The initiative aims to promote the production, development and consumption of organic and agroecological products, and to foster networking and exchange amongst farmers. This is achieved by organizing meetings and trainings and farm and fair visits. Another important activity is the organisation of an annual Biodiversity Fair the group organises in Tíjola and the collaboration with the school garden of the municipality.

Key activities are seed exchanges among members, other farmers and other CSBs (as the one managed by RAS). Currently, the initiative has 25 members in different areas of the province. The CSB records all the exchanges: varieties, participants, multiplication site and year, etc. Each sample receives a unique number so it can be tracked.

3.16 GRUPO DE ACCIÓN COMPARTIDA (SPAIN)[14]
ALONSO NAVARRO CHAVES

The Shared Action Group (Grupo de Acción Compartida-GAC) is a group of farmers mainly from the province Málaga of Andalucia that works on the recovery of local and ancient wheat and cereal varieties, in order to preserve this part of agricultural diversity as well as the traditional knowledge related to cereal production and cereal processing. But these wheats also provide special qualities as fodder, and can help to restore degraded soil and landscapes.

The group has worked mainly with a *durum* wheat, Trigo recio de Ronda, but also other local varieties of cereal have been recovered like Trigo Chamorro, Trigo rasposo de Tenerife and Salmerón velloso (*Triticum aestivum*), Trigo raspi-

Foto La Simiente


Foto Almajaraca


Fotos ZMAG


Foto Cyprus Seed Savers

[14] http://grupodeaccioncompartida.blogspot.com.es/


Foto Grupo de Acción Comunitaria

negro de Jubrique (*Triticum durum*), Escaña de Jaén (*Triticum monococum*), among others. These varieties came from traditional farmers but also from gene banks.

A fundamental aim of the group is to promote the use of local and traditional cereal varieties among farmers and to develop farmers´ networks and working groups. Thus, GAC provides seeds for farmers that aim to work with local varieties on an exchange basis. GAC collaborates with RAS in the assessment and promotion of local cereals in Andalucia.

3.17 ZMAG IN CROATIA[15]

SENDY OSMICEVIC

This presentation was added to the report – Sendy Osmicevic attended the workshop but could not give a presentation for reasons of time.

Zelena Mreža Aktivističkih Grupa (ZMAG - green network of activist groups) promotes the implementation of different practices connected to sustainable living. Our main long-term project is a recycled house formed as an ecovillage and permaculture education centre, situated in the village of Vukomerić near Zagreb. Our house is 100% energy sustainable (electricity, water, food) and built from different reused materials. It is the central place of our organization – a working place that serves as a practical and experimental site for promotion and dissemination of environmental knowledge and skills based on permaculture ethics and design.

Since our beginning in 2002, we continuously organize educational activities (workshops, seminars and conferences), maintain a garden and a seed collection with more than 250 varieties. The seed bank is managed by own staff with the help of volunteers. Our seed bank mostly consists of seeds packets of Croatian organic gardeners and seedlings who have been keeping their seeds for generations. Twice a year we organize seed exchanges for the public, to gather organic seed collectors and connect them with gardeners.

We also have our public library with various literature related to sustainable living, seed and food protection, policies and food sovereignty. In future, important aims will be to improve our database and the technical conditions for the seed bank, to start to produce traditional seeds and bring out a manual for the seed guardians.

3.18 CYPRUS SEED SAVERS[16]

SOFIA MATSI

This presentation was added to the report – Sofia Matsi attended the workshop but could not give a presentation for reasons of time.

The organisation of Cyprus Seed Savers (CSS) came into life 4 years ago as a reaction to the economic and social crisis due to bank bail outs. Since then, members of the group have been dedicated in locating, multiplying and sharing heirloom and traditional seeds with locals and other seed saving groups internationally. A great passion of CSS is also to promote resilient natural farming practices, using permaculture, biodynamic and organic methods with the aim of planting and growing nutritious food.

Each year, CSS organize a number of open seed sharing and collective seed sowing events in collaboration with local communities, schools and universities with the goal of sharing resilience knowledge and seeds with the community. CSS has an active relationship with the Agriculture Research Institute of Cyprus (ARI) exchanging and multiplying varieties that are indigenous or registered as local heirloom seeds. There is an ongoing collaboration with other local and international environmental groups and for the past

[15] www.zmag.hr.

[16] http://savegea.com

couple of years CSS have been participating in the Peliti annual seed celebration event in Paranesti. CSS are also advocating local seed legislation, defending local farmers' freedom and their right to use and save free unpatended seeds.

CSS reach out to the community by organizing movie projections, Permaculture seminars and through participating in social and environmental events, such the annual Cyprus Eco Festival. The group has also began constructing its own seed bank, made out of sandbags and earth and is currently fundraising to help finish its construction. For the time being CSS have launched an electronic seed bank through the online seed exchange platform SAVEGEA.COM where members can freely sign up and exchange seeds between them.

3.19 CIRCULOS DE SEMENTES (PORTUGAL)[17]

FREDERICA TEIXEIRA

This presentation was added to the report – Frederica Teixeira attended the workshop but could not give a presentation for reasons of time.

The project was started on 14 October 2012, with the aim to create a network throughout the country to rediscover, gather and share the national heritage of ancient and traditional seed varieties. Awareness campaigns and knowledge sharing about seeds and food sovereignty are other important objectives.

The Circle of Seeds Network consists of small groups (circles), spread across the country, independent but with support of a larger network. All circles contribute by sharing information, organizing research meetings, trips, visits to farmers. They share their seeds for free with the other circles of the network.

The Network has a blog and a Facebook page where the activities of several Circles are shard, as well as relevant information in the context of the preservation of seeds. A Circle of seeds starts from gathering a group of friends, each one signing up and comitted to multiplying and storing seeds of one or more plants species. During the gatherings, everyone shares their seeds and information. Each Circle has a seed bank. In theses sed banks, we give priority to traditional seeds of the region. These small seed Banks helps to conserve the traditional seeds and maintain the largest number as possible of seed diversity, in a decentralized and local way.

The Circles of Seeds Network offers a free support team that can be requested by email. This team is available to answer any questions, to make visits and preform seed saving workshops. The visits and the workshops are free, but the Circle that calls the team needs to cover the expenses for the travelling, the accommodation and food.

Every year, national meetings are organized to celebrate the seeds, dance, share seeds and moments. We organize lectures about the importance of preserving local seed varieties, seed saving workshops and workshops for schools.


Foto Circulo de Sementes

[17] www.wakeseed.org

4. PRESENTATIONS FROM INTERNATIONAL ORGANISATIONS

4.1 USC-CANADA: EXPERIENCES FROM AN INTERNATIONAL NGO SUPPORTING CSBS[1]

MARIE-EVE LEVERT

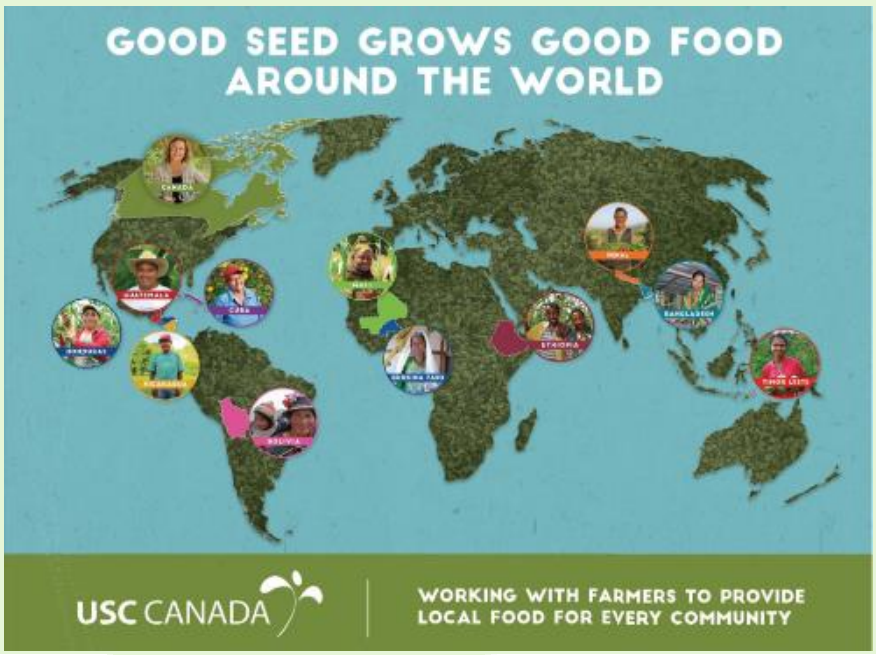
USC started working on seeds and CSBs in the 1980ies in Ethiopia, working with partners on the ground, rebuilding the seed system after a severe hunger crisis. The "seeds of survival" program was subsequently started in several countries, with activities in the fields of building Community Seed Banks, participatory plant breeding, farmer led research and others.

There are many differences, but also common features among CSBs around the globe. Within the communities, CSBs complement household seed systems, supports farmers' seed systems and empower communities through support for self-management. Between communities, CSBs can provide sites for experimentation, and increase the exchange and networking among farming communities.

CSBs have valuable features with regard to biodiversity conservation. They serve as refuges for varieties that were once widespread, and support the conservation of genetic resource with little to no conventional market value. CBSs furthermore contribute to climate change resiliency. They offer quick access to locally adapted seed and thereby strengthen food security at local level. CSBs are a way to achieve visibility and credibility in face of governments.

But there are common challenges as well, lying in the management of seeds and issues of documentation, storage, characterisation and multiplication. A proper assessment of the impacts, strengths and weaknesses is a necessary step for further development. In this regard, collaborations with partners in civil society, the public seed banks and the research sector play an important role, in order to enhance the social sustainability and economic viability of CSBs.

However, there is still a way to go, despite all efforts undertaken so far. The work of farmers is often not recognized by universities. On the other hand, the new commercial varieties offered are not necessarily what farmers need. Continuity is also a challenge, so that people engaged in CSBs are willing and able to keep going for a long time.



[1] www.usc-canada.org, www.communityseednetwork.org

Also institutionalization is an important issue with a lot of work ahead. USC developed an assessment tool for seed security at community level, in order to make a needs and gap analysis and to identify what needs to be done. To overcome the challenges CSBs face, more learning exchange among the members in a CSB and also between CSBs is crucial, from a local to the global scale. It is important to pool together all tools that have been developed in order for the CSBs to move forward globally.

USC Canada started a Canadian program in 2012, *The Bauta Family Initiative on Canadian Seed Security* (BFICSS), based on 74-year experience working with different partners across the globe. The goals of BFICSS is to increase the quality, quantity and diversity of ecological seed in Canada. Capacity building for ecological seed growers and farmer-led research are important components of this initiative.

A main difference between Canada and its international partners is that the hobby gardeners and seed savers networks are the main stakeholders in Canadian CSBs. Although CSBs are not farmer-focused, they still play an important role in the resiliency of the country seed systems. This is why, BFICSS decided to support the CSB movement in Canada, notably via the establishment of a knowledge exchanges platform for CSBs' leaders in Canada and the United States: the Community Seed Network.


Foto Bioversity International

4.2 TOWARDS A GLOBAL CSB NETWORK[2]

RONNIE VERNOOY, BIOVERSITY INTERNATIONAL

Bioversity International has a long history of working with partners in the field to support and strengthen CSBs all over the world. There are fantastic CSB champions in many regions, but for a long time, little was known about their successes and challenges. Surprisingly, searching the literature in 2013 brought little results apart from references of 'grey' literature nature.

The book "Community Seed Banks: Origins, Evolution and Prospects" was therefore the first its kind in providing a comprehensive documentation and comparative analysis of CSBs in many parts of the world.

The survey of European CSBs and the presentations at the workshop show that a strong network emerged in Europe, and it is very positive to see that so many things are happening there. The challenges for CSBs seem to be similar all around the globe. Of course, in Europe networking is much easier than in other parts of the world due to ease of travelling and use of internet.

In many parts of the world CSBs have not had much chance to interact. Here in Rome is probably the first meeting bringing so many CSB initiatives together. Still, a global mechanism to support CSBs does not yet exist.

We have been working on a proposal to create a global platform for CSBs that would provide a number of services, including for networking. It seems a good time to do create such a platform now, as we see a renewed and strong interest in community seed banking. Farmers are getting more organized and are in many places supported by broader networks. There is growing awareness amongst citizens about importance of seed issues, embedded in movements like organic agriculture, agroecology, and community supported agriculture.

Stakeholders are talking to their governments to dedicate more effort to the work that community seed banks do. Some governments started to support programmes for CSBs, for example in Buthan, Brazil, Ethiopia, Nepal.

It is good to see that people concerned with conservation and crop improvement are discussing together and joining forces.

[2] www.bioversityinternational.irg

Linking conservation, improvement and value addition through marketing has a lot of potential.

In many countries climate change is a driving force. The varieties farmers used before are no longer adequate under the changing conditions. There is a real need to get new diversity in the fields and community seed banks can be very effective in doing that.

The question is: How can we better strengthen CSBs?

CSBs and their partners have learned from mistakes and have evolved further. From an analysis of the collected experiences, Bioversity International came up with some factors that need to be in place in order to achieve sustainability of CSBs:

- Farmers' interest and leadership
- Presence of a local facilitator and network builder
- Technical and financial support
- Building links with crop improvement efforts
- Responsiveness to climate change stress
- Potential to evolve into a broader local organization
- Policy and legal support

A global platform supported by stakeholders could be a good way to strengthen CSBs around the world. Possible functions could be the documentation of experiences, fostering learning and sharing processes (e.g. by publishing books or films) and supporting in a systematic way participatory action research with farmers.

Strengthening the technical capacities of farmers for seed banking and promoting new techniques that could be of interest for farmers would be another goal of the network.

A third, very important function would be to enhance recognition of the CSB movement, political advocacy and legal support. Last but not least, many CSBs struggle with data management and data sharing. These are key challenges from a financial and technical point of view, but also raise questions with regard to access and IPRs.

A global CSB network could develop connections with gene banks, breeders, governments and mainstream researchers. It could consist of a group of organisations that work together to support initiatives around the world. The platform should be demand driven, participatory and membership based, with a fair and diverse representation, and it could be started as a project with donor support. Input from all stakeholders to these ideas are very welcome.

Discussion, questions and remarks

More and more people in cities have demand for seeds – for example in South Africa, city gardeners in Soweto Johannesburg have set up a community seed bank to conserve, produce and share seeds. Another example comes from Brazil: some state governments are asking community seed banks to produce traditional varieties to supply public institutions, such as schools and hospitals. So the link with cities would be an important issue.

Adding value to seeds in a community seed bank is very important for sustainability. This can be done through the promotion and marketing of special crop varieties and seeds (where this is allowed).

Language is an issue for any interactive mechanism with members from different regions of the world. Funds to be managed by a global platform are probably best spent in small units for initiatives on the ground, bringing partners to work together on their issues in a local or regional context.

Farmer-to-farmer-exchange is a crucially important activity. Meetings of representatives can be useful to provide guidance and build/strengthen capacity, but farmers should always be at the core. When setting up a global CSB platform it should be farmer-driven and farmer-led.

Farmers are busy people, and sometimes do not or cannot take ownership of a project or process. Cooperation with other stakeholders is often a good solution for farmer-focused initiatives.

The first thing to do is to give farmers the support they need. This can facilitate the building of their own strong organization and strengthen the capacity to add value to the community seed bank collection. A global CSB platform can interlink local initiatives .

What farmers grow now is in many cases not suitable under climate change conditions. Right now farmers are facing pests and diseases they have never seen before, which is probably due to climate change. Many farmers have started to look for novel diversity. Researchers can help to speed up to the process to finding novel diversity that is better adapted.

5. SWOT ANALYSIS ON CSBS

ANALYSING STRENGTHS AND WEAKNESSES, OPPORTUNITIES & THREATS OF CSB

BEATE KOLLER AND REGINE ANDERSEN

During the workshop on Community Seed Banks a SWOT analysis was carried out. The aim of this exercise was to create and collect ideas on how to strengthen CSBs, and to discuss strategies on how to overcome the identified weaknesses and threats. The participants of the workshop gathered in six groups. This was done language wise due to limited interpretation resources. The groups collected and discussed the SWOT perspectives with regard to six different objectives of CSBs. The objectives had been extracted from the CSB survey results and were agreed upon by the workshop participants:

1) conservation
2) access and availability
3) sensitisation
4) training and capacity building
5) sustainable use - experimentation, PPB, products
6) advocacy - legal advice

The SWOT analysis was carried out in two rounds, so that every participant had the opportunity to contribute to two objectives. For each group a moderator from the DIVERSIFOOD consortium was named. A reporter was chosen to report back to the plenary session. The results were collected on papers forming a SWOT matrix.


Foto Beate Koller

5.1 RESULTS OF THE GROUP ON „CONSERVATION"

RAPPORTEUR: MARIE-EVE LEVERT

The group came up with the following concrete objective: "The CSB movement wants to CONSERVE genetic resources and knowledge for generations to come in an integrative, dynamic and evolutionary way"[1] and carried out a SWOT analysis. How can we use our strengths to cope with threats, and use opportunities to overcome weakness? How can we combine opportunities and strengths? The following strategies were discussed.

We have to ensure high and long-term commitment of members and supporters of the CSBs. By building social networks around the CSBs we can try to mitigate the risk of running out of financial and other resources. How can we attract a diversity of actors to become participants and supporters of CSBs?
The rising demand for sustainable food brings the opportunity to send the message of the importance of conservation of genetic resource and involve more stakeholders. That should be used to try to include new stakeholders from the food chain that support the work of CSBs with different capacities and to act as multiplicators of the idea.
We have to focus on sharing knowledge and methodologies – in order to minimize the dependence on financial resources, in order to accelerate learning processes, and to achieve more capacity for operation. Therefore, we have to improve the communication within and between CSBs.
We have to focus on the strengths of local, community -based systems in a climate change environment. A community based system can be used to distribute genetic diversity to a big area.

[1] Parts of the group would prefer to exchange the term „crop conservation" with the term and concept of biodiversity management. Management can encompass aspects of conservation, but generally reflects a more dynamic, evolutionary approach

PRESENTATIONS, DISCUSSIONS AND RESULTS OF THE SWOT SESSION WORKING GROUPS

SWOT ANALYSIS ON „CONSERVATION"

"The CSB movement wants to conserve genetic resources and knowledge for generations to come in an integrative, dynamic and evolutionary way."

Strengths

CSBs are able to conserve a **wider diversity** compared to individual seed collections or household seed collections.

Another strength lies in the **ownership** of the community. CSB are community based systems, that normally can be joined easily, thereby creating a broad basis.

The **motivation** of members is mainly to contribute to the objectives, not to gain financial remuneration.

The practise of many CSBs implements the concept of **"conservation through sustainable use".**

CSBs have the potential to **mitigate climate changes** by supporting crop adaptation at community level. CSBs conservation models are adaptable to different environments.

CSBs have good access to farmers´ & social groups. They enable the **implementation of farmers' rights**.

Weaknesses

CSBs depend on individuals – danger of loss of seeds and knowledge if key persons leave or die.

Some CSBs suffer from limited **seed quality control** and **gene flow management,** as well as a **missing consistency** in the creation and maintenance of collections.

CSBs suffer from **lack of capacity** to operate as independent structures and from absence of institutional capacity building mechanisms.

Some CSBs suffer from **limited access to land** within the communities.

CSBs suffer from **limited policy support.**

CSBs suffer from divergent interests, and sometimes miss a common voice; **dominant opinion leaders** - more space for other voices needed.

Opportunities

Rising **demand for sustainable food.**

Increasing on farm seed conservation can **create rural jobs** and widen livelihood options.

Sharing successful methodology and models applicable in diverse environment can be of great support.

Accessing additional resources by **smart interfacing** with other actors can be a solution for limited resources.

The CSBs movement can help create a **space for the recognition of farmers' rights.**

Threats

Missing **economic viability.**

Lack of **long-term funding**; little long-term commitment by funders.

Aging population may result in loss of skills.

A loss of genetic resources at increasing rate also increases the burden on the shoulder of CSBs.

Crop improvement may result in **narrowing diversity** – also in CSBs.

Climate change.

Plant variety protection and **seed legislation.**

5.2 RESULTS OF THE GROUP ON "ACCESS AND AVAILABILITY"

RAPPORTEUR: EZRA RICCI

The group did not arrive at a common definition , but agreed that: "Access and availability are at the core of Community Seed Bank activities".

A SWOT analysis was carried out and the following strategies and recommendations discussed:

- Explore existing networks to increase public awareness and to improve technical skills & knowledge
- Demand program changes in agronomic schools and sensitise students
- Develop new forms of cooperation, for instance between CSB and public gene banks (however, some CSBs fear to be exploited as seed multipliers to compensate the decrease of funding for public institutions. Others fear that CSB accessions could be used for private purposes (material theft))
- Return varieties from international gene banks to CSB
- Develop participatory plant breeding programmes, involving also the general public/consumers
- Advocate a legal framework that allows for seeds trade of open pollinated varieties

Debates in the group:

- Enhancing access and availability is a core activity of CSBs.
- The Italian group prefers the term "Seed Exchange System" to "Community Seed Bank".
- The French group prefers the term 'Maisons des Semences Paysannes' (Peasant Seed Houses) to "Community Seed Bank".
- The adaptation of seeds to local conditions and their multiplication to supply the local market requires several years (a bit less for cereals)
- In France, public seeds bank provided an easy access to their collections, and fostered the development of the French peasants' seeds network (notably thanks to an employee of the public seed bank regarding cereals). In Italy, the access to public seeds banks is less facilitated; therefore, most of the local seed varieties have been collected from old peasants by passionate farmers.
- Seeds exchanges strengthen social ties between farmers and gardeners. They also inspire newcomers, who however not always feel responsible for returning seeds to the provider. But the reciprocity of seeds exchanges is necessary within seeds networks.
- A system of deposit can be adopted to ensure that seeds donated are returned or at least compensated.
- Seeds exchanges are rarely accompanied by the necessary knowledge transfer

SWOT ANALYSIS ON „ACCESS"

"ACCESS AND AVAILABILITY ARE AT THE CORE OF COMMUNITY SEED BANK ACTIVITIES".

Strengths	Weaknesses
Collective/collaborative action Sharing of plants and knowledge Trust and mutual support Caring for the seeds is a quality in CSB	Seeds are made available only in small quantities within seeds networks; not enough to produce for local markets. Loss of seed quality along the network Knowledge and know-how transfer are time consuming and can be tiring. Lack of feedback from farmers provided with seeds can be frustrating. Lack of remuneration – people cannot live from activities, this leads to demotivation. Loss of professionalism Knowledge and skills gaps
Opportunities	**Threats**
Increasing public and political interest International networking, network development Awareness and skills improvement Legal framework revision	GMOs contamination Material thefts Wildlife devastation

5.3 RESULTS OF THE GROUP ON "SENSITISATION"

RAPPORTEUR: XIMENA CADIMA

The group came up with the following concrete objective: "One of the objectives of CSB is to promote a change in the way of thinking and practices amongst farmers, consumers, civil society and politicians about the importance of cultivated biodiversity for food sovereignty and cultural identity"


Foto Circulo de Sementes

The following strategies were discussed – how can we use our strengths to cope with threats, and use opportunities to overcome weakness? How can we combine opportunities and strengths?

- Use positive vision, good stories and credibility to reach out to mass media, civil society and other groups
- Use positive vision, good examples of CSB to be promoted with local media
- Create more linkages between urban and rural farmer communities
- Use greater awareness to find more volunteers in other groups than agriculture (e.g. in communication)
- Look for other volunteers (retired people or students) to take care of sensitisation issues
- Use modern technology for documentation
- Use good examples (good food) to address children & parents (in order to change habits in a long term perspective)
- Use creativity against lobby power
- Create a common platform for sharing knowledge (language is an issue)
- Enhance resilience – what do our initiatives need in order to continue?
- Focus on internal structures: How can better sharing of responsibility help us to endure?

SWOT ANALYSIS ON „SENSITISATION"

"ONE OF THE OBJECTIVES OF CSB IS TO PROMOTE A CHANGE IN THE WAY OF THINKING AND PRACTICES AMONGST FARMERS, CONSUMERS, CIVIL SOCIETY AND POLITICIANS ABOUT THE IMPORTANCE OF CULTIVATED BIODIVERSITY FOR FOOD SOVEREIGNTY AND CULTURAL IDENTITY"

Strenghts	Weaknesses
Knowledge about CSB management Creativity Credibility and good examples Commitment and positive attitude Links between local and cultural diversity "Our methods are proven by history". Good quality speaks for itself	Limited economic and human resources Little documentation of crops and knowledge in CSB Volunteers burn out, some people are tired and lacking motivation. There is a lack of coordinated cooperation amongst CSBs. Lack of knowledge regarding communication strategies
Opportunities	**Threats**
Exchanging knowledge and experiences between farmers Increasing collaboration with groups in related areas Civil society opening to agro-ecology, health & nutrition issues Economic and environmental crisis Potential of mass media	Institutions and policies are not supportive, there is little acceptance for CBSs. Big enterprises have a strong presence in the media and effective Lobbying strategies conflicting with interests of CSBs. It is hard to change a consumers´ habit.

5.4 RESULTS OF THE GROUP ON "TRAINING & CAPACITY BUILDING"

RAPPORTEUR: MARÍA CARRASCOSA

The group chose as concrete objective: "Facilitate training for important stakeholders (farmers, gardeners, researchers) to enhance the multiple functions of CSBs and the capacities of their members"

The following strategies and recommendations were discussed:

- Conduct multi-actor meetings to define learning goals
- Map the existing training materials and resources to save funds by not duplicating efforts
- Map the experts and farmers willing to become trainers
- Develop on-line training modules for wide outreach
- Use creative self-financing strategies and offer trainings at reduced prices
- Work on formal curricula, but also develop more flexible, hands-on tools (crop-wise)
- Farmers shall define what they need
- Develop training programmes from farmer to farmer, CSB to CSB

SWOT ANALYSIS ON „TRAINING & CAPACITY BUILDING"

"FACILITATE TRAINING FOR IMPORTANT STAKEHOLDERS (FARMERS, GARDENERS, RESEARCHERS) TO ENHANCE THE MULTIPLE FUNCTIONS OF CSBS AND THE CAPACITIES OF THEIR MEMBERS"

Strenghts	Weaknesses
CSB actors have a very practical, hands-on knowledge on the plants they conserve Combining the knowledge of the different stakeholders provides a large know how pool CSBs can build on a diversity of experiences, methods and skills CSBs are independent from formal educational institutions	There is a shortage of funds and human resources to conduct training and capacity building Farmers lack time to involve in trainings The differences of language and vocabulary used in different stakeholder groups are an issue to overcome in an multi-actor approach flexible (online) training tools are (too) expensive for many CSBs Some training contents have to be newly developed Approaches like "Multi-actor" and "bottom-up" or "needs-based" need further development and better implementation
Opportunities	**Threats**
Mapping of available resources and training materials CSBs provide possibilities for the development/ testing of new ways of learning/training CSBs can act as bridges between formal and informal knowledge Designing toolboxes that enable farmers and researchers to connect	The weak institutionalization of CSBs may lead to uneven and not constant funding Threats occur rapidly – our learning processes are sometimes (too) slow – how can we react quicker and anticipate upcoming challenges? Legal frameworks

5.5 RESULTS OF THE GROUP ON "SUSTAINABLE USE"

RAPPORTEUR: VÉRONIQUE CHABLE

The group chose as concrete objective: "Support farmers, gardeners and small scale breeders to utilize genetic resources in a sustainable manner".

The following strategies and recommendations were discussed:

- develop training modules on participatory breeding
- invest in marginal land by putting young farmers there
- invest in motivated, young farmers
- Use the demand for quality food and local products as a leverage to increase public attention to the importance of sustainable use of crop diversity
- Create platforms for and with farmers aimed at adding value to their production and reducing the risk of loosing crop diversity as well as farmers
- Look for other volunteers (retired people or students) to take care of sensitisation issues
- Use modern technology for documentation
- Use good examples (good food) to address children & parents (in order to change habits in a long term perspective)
- Use creativity against lobby power
- Create a common platform for sharing knowledge (language is an issue)
- Enhance resilience – what do our initiatives need in order to continue?
- Focus on internal structures: How can better sharing of responsibility help us to endure?

SWOT ANALYSIS ON „SUSTAINABLE USE"

"SUPPORT FARMERS, GARDENERS AND SMALL SCALE BREEDERS TO UTILIZE GENETIC RESOURCES IN A SUSTAINABLE MANNER"

Strenghts	**Weaknesses**
There is a diversity of models showing multiple ways of sustaining crop diversity.	Participatory plant breeding is not sufficiently institutionalized to contribute according to its potentials.
Opportunities	**Threats**
Climate change is changing the agricultural context, increasing the possibilities to communicate the importance of sustainable use of crop diversity. Increasing commitment of farmers all over the world to save diversity, increasing interest in organic agriculture leads to diversification. CSBs can create links between farmers and other groups of society. CSBs can create new work and income for young people.	Loss of farmers and agricultural land, combined with the lack of policy support and financial resources.

5.6 RESULTS OF THE GROUP ON "ADVOCACY – LEGAL ADVICE"

RAPPORTEUR: FULYA BATUR

The group chose as concrete objective: "An objective for community seed banks is to advocate for legal space to save, use, develop, exchange and sell their seeds"

The following strategies were discussed.

- Use public support based on just demands to put pressure on States not fulfilling international obligations & create legal space
- Based on wide legitimacy, demand representation of CSB at all national & regional political processes affecting the represented entities
- Collect money at European level to spend on capacity building & exchange of experiences (pooling specialists)
- Replicate success stories to overcome internal fights. Focus on the values that connect CSB members.
- Use approved legislation & policy processes to help become resilient & self-sufficient economic powers (including by getting funding)
- Pool human resources to provide advice to all people representing CSBs in different processes
- Use public support based on positive arguments to overcome major opponents
- Use public support to expose inconsistencies & inaction to create legal space
- Use the diversity of representations to bring more awarenesss on legislation & get a seat at the table
- Combine idealism with market/economic tools to ensure public authorities listen & understand your arguments

SWOT ANALYSIS ON „ADVOCACY"

"AN OBJECTIVE FOR COMMUNITY SEED BANKS IS TO ADVOCATE FOR LEGAL SPACE TO SAVE, USE, DEVELOP, EXCHANGE AND SELL THEIR SEEDS"

Strenghts	Weaknesses
The content of advocacy = our arguments: Environment, public goods, CSB as income-generating businesses, good practise examples Representation and legitimacy: Various societal groups Responsiveness & resilience	Internal disagreements Lack of financial and human resources Lack of power
Opportunities	**Threats**
Collaboration – use existing advocacy structures Take advantage of and influence policy processes in course Become official stakeholders	Strong and numerous opponents Lack of understanding from public authorities Lack of true representation in policy processes Contradiction between legal texts Disagreement between CSBs

5.7 SUMMARY OF THE ANALYSIS
BY REGINE ANDERSEN

During the SWOT session, participants were working on strategies: How to cope with the challenges, take advantage of the opportunities and strengths and how to avoid the threats that were identified in the analysis? I want to summarize the results, highlight some key findings from this process and draw some preliminary conclusions, always with regard to one of the six defined objectives.

Objective: To conserve genetic resources and knowledge for future generations in an integrative, dynamic, and evolutionary way.

An important strength of CSBs in this context is their ability to conserve a wider diversity of genetic resources than with individual or household seed collections. A central weakness of CSBs is their lack of technical means and support for this work. Among the most central opportunities is the rising demand for sustainable (and local) food, that may help generate attention to the work of CSBs. A major threat is the loss of human resources and knowledge in CSBs due to heavy work load for volunteers and/or age. Selected strategies comprise: (1) Include new stakeholders from the food chain to support the work of CSBs with different capacities and to act as multiplicators of the idea; (2) Share knowledge and recognize those who do the work; (3) Implement Farmers' Rights as set out in the International Treaty on Plant Genetic Resources for Food and Agriculture; and (4) Raise awareness about the importance of supporting CSBs financially at a long-term basis.

Objective: To make genetic resources accessible and available is a core activity of CSBs.

In our analysis we found that the collective action to make genetic resources accessible and available is the main strength of CSBs. A weakness is that there are no remunerations, and the work relies on voluntary engagement. This makes it vulnerable. An important opportunity is the increased international networking that provides opportunities for making more diversity accessible and available. A possible threat in this context is the demotivation of farmers to participate in making genetic resources accessible and available due to heavy work load and lacking support. Their contribution is core to the CSB system. Selected strategies comprise: (1) Develop new cooperation forms and strengthen ties with formal gene banks; (2) Engage in participatory research to strengthen the work of CSBs; (3) Work through existing networks and organizations to disseminate information and attract funding.

Objective: To promote a change of thinking and practices among farmers, consumers, civil society and policy makers that reflects the importance of crop genetic resources for food soveregnity and cultural identity.

An important strength of CSBs in this regard is their ability to establish the links between genetic resources, cultural identity and food production. This is important for sensibilisation. A weakness is that there is little documentation of the knowledge related to crop varieties, and that communication skills are lacking. An opportunity is that massmedia provides opportunities of communication and mobilization, but a threat is that the action needed to bridge the gap between the weakness and the opportunities requires resources that are difficult to mobilise due to lacking support from political authorities. Selected strategies comprise: (1) Use good narratives to reach out to mass media, civil society and other groups to achieve credibility; (2) Create linkages between rural and urban groups and invite broadly, to attract support and work capacity; and (3) Create a common platform for sharing knowledge.

Objective: To facilitate training to important stakeholders (farmers, gardeners, researchers) to enhance the multiple functions of CSBs and capacities of their members.

A strength of CSBs in this regard is that their actors hold very practical, hands-on relevant knowledge on the plants they conserve. A weakness is the shortage of funds and human resources to conduct training and capacity building. Important opportunities are that CSBs provide possibilities for the development and testing of new ways of learning and training and to act as bridges between formal and informal knowledge. The major threat is the weak institutionalization of CSBs, which may lead to uneven and not constant funding. As training and capacity building are long term strategies, the lack of steady funding provides a barrier. Selected strategies comprise: (1) Conduct multi-actor meetings to define learning

goals; (2) Map existing training materials and resources to save funds by not duplicating efforts; (3) Map experts and farmers willing to become trainers; (4) Develop on-line training moduls for wide outreach; and (5) Use creative self-financing strategies.

Objective: To support farmers, gardeners and small-scale breeders to utilize genetic resources in a sustainable manner.

Among the strengths of CSBs in this regard is the diversity of models among CSBs showing multiple ways of sustaining crop diversity. So far it is considered a weakness that participatory plant breeding is not sufficiently institutionalized to contribute according to its potentials. Climate change is changing the agricultural context, increasing the possibilities to communicate the importance of sustainable use of crop diversity, and in this context, it can be considered an opportunity. The most important threats are the loss of farmers and agricultural land, combined with the lack of policy support and financial resources. Selected strategies comprise: (1) Use the demand for food quality and local products as a leverage to increase public attention to the importance of sustainable use of crop diversity; and (2) Create platforms for and with farmers aimed at adding value to their production and reducing the risk of losing crop diversity as well as farmers.

Objective: To advocate for legal space to save, use, develop, exchange and sell their seeds.

A major strength in this regard is the fact that CSBs provide good examples of the need for legal space related to the use of seeds. A central weakness is the lack economic resources and human capacity among CSBs to engage in advocacy work. The most important opportunity is that there potentially is massive support from the public in this regard. The major threat is considered that opponents of legal space for CSBs related to their seeds are strong and numerous. Selected strategies comprise: (1) Use public support for just demands of CSBs to put pressure on national authorities to comply with their commitments related to the Plant Treaty; (2) Demand representation of CSBs in relevant decision-making bodies; and (3) Pool human resources to provide advice to CSBs on regional and national policy processes.

Some conclusions

This summary has highlighted some of the findings from the SWOT-analysis on CSBs. More work is needed to harvest the results from the workshop and further deepen the analysis. The highlights already show the great potentials of the SWOT approach to analyse the potentials of CSBs and derive viable strategies.

The SWOT-analysis showed that there are many opportunities to strengthen and scale up the work of CSBs. This would also contribute greatly to the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture. A key to making use of these opportunities is to develop joint strategies and collaboration among CSBs to promote action. Political support and financial resources are crucial to speed up action.

6. DEFINING COMMUNITY SEED BANKS?

RESULTS OF THE WORKSHOP DISCUSSION AND SOME REFLECTIONS

BEATE KOLLER

The results of the survey on 85 CSBs in Europe were presented and discussed at the workshop in Rome, and numerous individual presentations were given by representatives of CSBs from all over the world. All those inputs clearly showed:

- CSBs are very diverse
- They differ greatly with regard to age, size, structures, scope and activities
- However, they also display certain similarities in their concepts and approaches

„Key aspects" instead of a definition

As a result of group and plenary discussions the participants agreed on a process of describing **"key aspects"** of Community Seed Banks - instead of aiming at a **common definition** of Community Seed Banks as it was initially foreseen in the project design.

A description of key aspects should foster the understanding of CSBs as part of the informal seed system, and serve as a trigger for common reflections on underlying concepts and assumptions—whereas a formal definition of Community Seed Banks seemed too rigid to the workshops participants. To follow this potentially reductionist process of coming up with a definition was assumed to carry the risk of excluding certain types initiatives for purely formal reasons.

The elaboration of "key aspects" of CSBs will have to be part of a follow up process of the Rome workshop. However, some first inputs shall be given in this chapter that result from the group discussions and feedback that was received on the report of the survey results.

Banks, Networks, Houses, Libraries and Archives

It should be mentioned that the term "Community Seed Banks" was used as a terminus technicus for the survey and the workshops. It was chosen because the term had already been established in the international discourse and scientific as well as grey literature. At the same time, it is important to see that many initiatives in Europe themselves do not use the term in their internal and external communication. Instead, other terms are widely used.

Networks

The terms "Red de semillas" in Spain, "Rete Semi Rurali" in Italy, "Reseau Se-

mences Paysannes" in France speak of seed networks.
Networks carry social interactions based on reciprocity – probably, the exchanges of seeds and knowledge are in the focus here.

Houses
"Maisons de semences paysannes" is a term that is widely used in France and was chosen by members of the French seed network "Reseau de Semences paysannes".
The house is a metaphor for social relations, for reproduction and care. It seems to express that here, seeds are not "stored away", but kept in the middle of life.

Libraries
"Seed library" is a term that is common in the UK, but the German equivalent "Samenbibliothek" is also used in Switzerland.
A library is a facility where an important good – in our case, seed samples and associated knowledge - is taken care of and made available for a community, following certain rules. The library must not be consumed - what has been borrowed must be replaced by the users in order to sustain the usability for the next generation.

Archives
"Seed archive" has a similar connotation as a seed library.
An archive probably focusses a bit more on the specific knowledge that is needed for and attached to the running of a collection / archive. The management of information is emphasised in this picture.

Banks
A "bank" is a facility for storing goods and values – in our case, seeds and other plant propagation parts.
The reason some initiatives prefer other names rather than "bank" or "archive" is that they associate with it a centralised, static and conserving approach that is rather detached from live processes and interactions.

Communities of place and Communities of Practice

We can see that in the terms and metaphors used, human communities are reflected in different ways. What can be said about the "Community" aspects in Community Seed Banks?

The word "community" derives from the Latin communis, "shared in common". Following the Blackwell Encyclopedia of Sociology, the English word "Community" means a small or large social unit who have something in common. This can be sharing of a geographical area, or other common aspects like norms, values, or identity.

From the survey we see that in Community Seed Banks are always communities of values, mostly communities of practice, and sometimes also communities of neighbourhoods or local areas.

Diversity, Conservation, Exchange, Community, Sovereignty

In the survey, the participating initiatives were asked about important terms with regard to their values and culture (see page 19). From a long list of terms all initiatives chose "diversity" as the most important one. Other frequently picked terms were „conservation", „sovereignty", „community" and "exchange" .

These results could serve as a starting point for future collaborative research on key concepts of community seed banks in Europe.

ANNEXES

All annexes can be downloaded from www.diversifood.com or www.communityseedbanks.org/material

ANNEX 1	Questionnaire of the survey on community seed banks in Europe (English version)
ANNEX 2	PRESENTATIONS
	2.1 ARDEAR Auvergne-Rhône-Alpes en France
	2.2 Fédération Rénova in France
	2.3 Il fagiolo magico in Italy
	2.4 az. agricola Villa Rocca / Consorzio Quarantina
	2.5 Coltivare Condividendo in Italy
	2.6 The Garden Organic Heritage Seed Library in the UK
	2.7 Aegilops in Greece
	2.8 The Danish Seed Savers Froesamlerne
	2.9 Red de Sem. "Resembrando e Intercambiando" (Spain)
	2.10 Red de Semillas de Euskadi
	2.11 Red de Semillas de Gran Canaria (Spain)
	2.12 Red Andaluza de Semillas "Cultivando Bio..." (Spain)
	2.13 Asoc. Subbética Ecológica (Spain)
	2.14 La Simiente (Spain)
	2.15 Almajaraca (Spain)
	2.16 Grupo de Acción Compartida (Spain)
	2.17 USC-Canada: Experiences from an international NGO
	2.18 Bioversity International: Towards a global CSB network
	2.19 CSB SWOT Analysis results from a preparatory workshop in Rome, 21. September 2017.

WWW.COMMUNITYSEEDBANKS.ORG

On communityseedbanks.org, you can find a living map of CSB initiatives in Europe, providing links to websites and contacts of more than 80 initiatives Europe-wide.

The website contains a collection of community seed bank material—links to relevant videos, books and literature.

You can find all the presentations of community seed banks on the website that were given during the workshop in Rome in September 2017—from France, Italy, the UK, Greece, Denkmark, Spain, Bolivia, China, Zimbabwe, Guatemala and Ethiopia.

Visit www.communityseedbanks.org/material

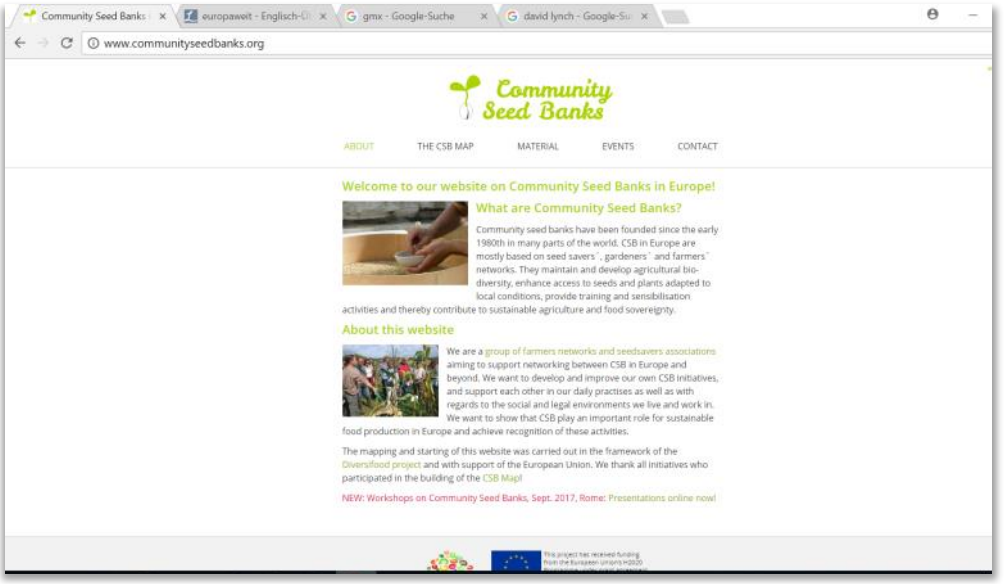


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Foto: Arche Noah


Foto: ARDEAR Rhone-Alpes


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ARCHE NOAH

Rete Semi Rurali