DYNAVERSITY

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D3.3 Innovative mechanisms of governance for genebank management

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Foreword

In line with the H2020 policy on multi actor research projects involving the agricultural community, DYNAVERSITY contributes to sharing solutions/opportunities ready to further develop *in situ* valorisation activities in the field of genetic resources.

The overall objective of WP3 is to increase the use of diversity (within species and number of species) in the overall food chain, including and starting from breeding activities? The specific objectives of WP3 read as follows:

- Better exploiting ex situ GR (wild and landraces) to boost renewal of the overall cultivated biodiversity for sustainable food systems;
- Showing diversity to the different stakeholders in field demonstration trials;
- Showcasing diversity to the wider public; and
- Sustaining collective action and networking on PGRFA, promoting Community Seed Banks and Databases.

As part of WP3, one dedicated objective is to “connect community seed banks and farmers’ networks involved *in situ* conservation with institutions involved in *ex situ* conservation”. This deliverable reports about innovative mechanisms of governance for genebank management.

Table of contents

Introduction

Ex situ conservation has been established in a context in which crop diversity was conserved for the benefit of few actors able to mobilize it (researchers and breeders) and for a specific agricultural model. As already mentioned in D 1.2, the divergence of views between *in situ* and *ex situ* approaches is a half-century debate, which emerged as early as the 1960s (Frankel et Bennett 1970). Since then, while the recognition of *in situ/ex situ* complementarity has always been emphasized, it has never been taken up at a large scale, and unbalanced investments (both financially and conceptually) have been made between *in situ* and *ex situ* (Cohen et al. 1991; Westengen et al. 2018).

A publication by Westengen et al (2017) identifies six ways of using *ex situ* conserved material in relation to farming communities: Repatriation/reintroduction, Community banks, Participatory selection, Emergency seed intervention, Introduction of old varieties into new environments, Integrated seed systems.

Recent developments of initiatives, such as Community Seed Banks (Vernooy et Clancy 2017), hardly fit in the current binary divide and oblige to reconsider the current *in situ/ex situ* divide and more generally the conservation landscape[1]. The usual approach of considering *in situ/ex situ* linkages is to see how *ex situ* can support *in situ* and rarely the other way around: how *in situ* could support *ex situ* conservation? Besides, both categories of *ex situ* and *in situ* are taken for granted and not questioned.

The challenge is to move to more dynamic and pluralistic approaches of conservation whereby a diversity of actors could mobilise the diversity conserved either *in* or *ex situ* to respond to a diversity of challenges, contexts, and problems. How the *ex situ* community could make use of existing on-farm "conservation" approaches to promote a more dynamic vision (conservation through use) and what obstacles to do so? How to bring more on-farm logic (dynamic, collective, social, and cultural dimensions, etc…) within genebank practices? How the *in situ* community could make use of the existing infrastructure of the *ex situ* community to improve security of the diversity conserved *in situ* and what obstacles exist for doing so?

This deliverable reports **about perspectives for new forms of interaction between conservation and breeding communities** based on a diversity of point of view gathered from various actors concerned by the dynamic management of crop diversity. Definition of "conservation and breeding communities" and "dynamic management" proposed in D1.1 are recalled here:

- Conservation and breeding communities: "community seed systems are composed by a diversity of actors (farmers, genebank, breeders, local conservatory, researchers, community seed banks, farmers and seed savers organisations, consumers, etc.) interacting through seed and knowledge transfers" [refers to 1.2) Seed networks (D1.1)].

[1] For more information about the role of Community seed banks in Europe see www.communityseedbanks.org and the website of the HORIZON2020 project DIVERSIFOOD www.diversifood.eu.

- Dynamic management (DM) recognises conservation as a dynamic process realised through use and exchange among the widest range of actors, that better accounts for the evolving nature of material however it is managed (including *ex situ*). DM is considered as an overarching principle that allows to move beyond the binary division of labour between *in situ* and *ex situ* as given and fixed categories; and move beyond a binary division of labour between conservation in one side and use on the other side (a vision directly deriving from natural resources perception of conservation). DM becomes an integral part of the integrated seed systems/networks presented earlier that connect different actors, resources, and rules [refers to D1.3) and agrobiodiversity conservation (D1.1)].

As part of the DYNAVERSITY project, the aim of this document is to identify innovative governance mechanisms for genebank management by involving actors from the conservation and breeding communities.

This document first describes the process of a **collective design method,** used in the framework of multi-stakeholders (researchers, genebanks managers, farmers seed producers, NGOs) workshops aiming at revisiting the role of the genebank within the institutional framework of crop diversity management.

The next sections develop the different results of these workshops:

- Result #1: The roadmap established to put into action the different steps necessary to achieve the long-term goals;
- Result #2: Organisation of the first on-site visits;
- Result #3: Synthesis on the concept of third place and first considerations for a third place on cultivated diversity, before concluding with some perspectives.

1. An innovative collective design method

This activity is based on the observation that even if they are still too rare, some collaborations within the conservation and breeding communities work very well: gene bank managers, gardeners, farmers, conservatories, or community seed banks work very well. The aim of this activity was to create spaces for dialogue between gene bank managers, gardeners, farmers, conservatories, or members of community seed banks to amplify this phenomenon so that this diversity of actors gets to know each other better, share their respective experiences and collectively outline the first steps to be taken to envisage a sustainable collaboration on the issue of dynamic management of crop diversity. To this end, between 2019 and 2020, two workshops were organised with about twenty five participants representing the diversity of the above-mentioned actors.

The workshop in Mèze (November 2019)

This workshop was organised in Mèze (France) in November 2019 and brought together 25 European and African participants[2] from different sectors (curators, researchers, and practitioners) with direct or indirect experience of working in or with gene banks: NGOs, farmers' seed producers, researchers, genebank managers. Based on past or current experiences of linkages between *ex situ* and on-farm conservation, the objective was to identify opportunities and constraints for changing practices for the conservation, exchange and use of cultivated diversity in a way that benefits the widest range of actors. This workshop used a foresight method that led us to imagine different possible roles of gene banks in 10-year time. This approach allowed reconsidering the present situation and building a shared diagnosis of the situation and identifying expectations in terms of the evolution of the role of gene banks in the more global landscape of the dynamic conservation of cultivated diversity. It also helps identifying opportunities and constraints, tensions and frictions/antagonisms and possible actions.

This collective work has led to the emergence of two suitable/desirable visions:

- The COSMOS-ETHIC vision in which local/territorial dynamics are at the heart of the conservation system with a focus on the socio-cultural dimension of crop diversity.
- The PLURAGOUV vision which consisted in a global and pluralistic conservation system structured in networks with multi-stakeholder governance to respond to the diversity of local and global challenges, while maintaining a long-term security scope

and three non-desirable visions:

- The TECHNOBANK vision in which the focus is put only on research activities related to genomics and synthetic biology
- The PRIVAGENE vision in which genebanks are privatized and used exclusively for economic interests
- The COLLAPSE vision in which genebanks are unable to cope with the ecological collapse

The different participants of the workshops identified current opportunities and obstacles that push or block the evolution towards the two first desirable scenarios and then identified possible actions that could help reaching one vision selected as the most suitable (COSMOS-ETHICS).

This first workshop allowed to broaden the scope of our reflection by repositioning the role of genebank in a larger societal project, including the Human-Nature relationship.

The online workshop using the KCP method

The Knowledge-Concept-Proposals method is originally designed for business industries in order to foster disruptive innovations.

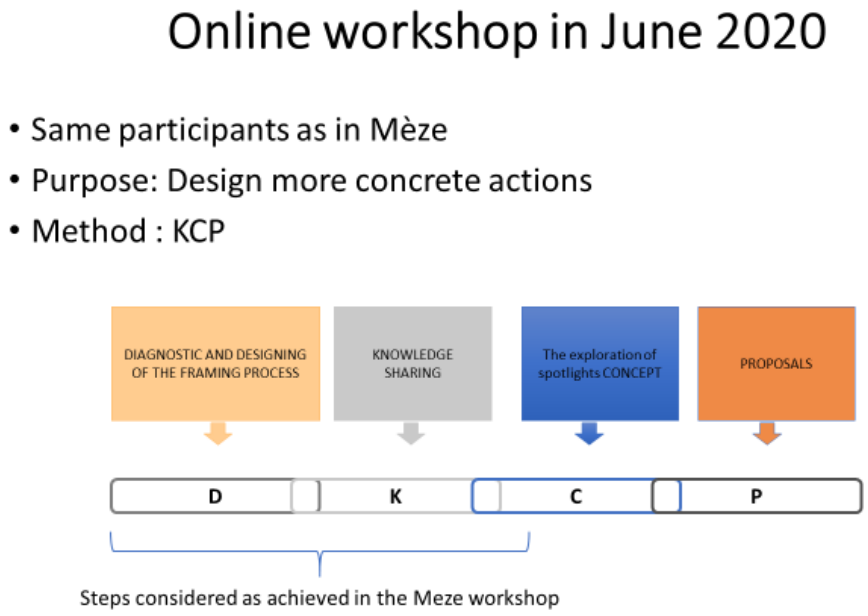
It comes from the design theory which links the Knowledge space and the Concept space in a mutually beneficial way (Hatchuel and Weil 2018). It aims to involve different stakeholders in

2 France (18), Tunisie (1), Algérie (1), Italie (1), Sénégal (1), Mali (1), Côte d'Ivoire (1), Niger (1)

the course of a process (Hatchuel, Le Masson, 2009). This method has been adapted to the sector of agroecosystems by Elsa Berthet from INRAE (Berthet, 2013). It is a way of overcoming the different obstacles that can be identified in the framework of heterogeneous stakeholders. It fosters creativity by helping to go beyond existing fixation bias and find new solutions (Berthet, Vourch et al., 2020).

This method is implemented in different steps: the diagnostic and designing of the framing process, the knowledge sharing process, the exploration of spotlights concept, the proposals.

This collective design method seemed particularly suitable: first, it was designed to lead a large group to collectively build an innovation strategy; and second, it relies on collective design workshops that foster knowledge sharing, the identification of knowledge gaps, and the exploration of innovative ideas.



Building upon the results of the Meze workshop, the following concept projectors were used with the same participants to foster innovation:

- the decentralized genebank;
- the genebank anchored in its territory;
- the genebank as a commons; and
- a polycentric network of crop diversity initiatives

Different “pictorial boards” have been designed for each concept projector to inspire the different participants (see Annex).

Different ideas have been generated and then a selection of those different innovative ideas has been made in order to keep just one “project” for each group.

The results of the different break-out groups have highlighted the need for:

- reinforcing knowledge sharing, cross-learning and mutual understanding through more frequent interaction and trust-building activities
- better mapping out the different actors in a more comprehensive way in order to enhance the social diversity associated to crop diversity activities, beyond research and production
- developing truly collaborative research program through joint actions that beneficial for all actors involved and in which governance is shared among the members

Another finding was the expression in all the working groups of the need to create a new governing body gathering the different stakeholders and putting all of them on equal terms to work together in the crop diversity. Such ways of organising collectively on the issues of dynamic management of cultivated diversity exist in Europe and outside Europe, some of whom participated in these workshops. One activity of the DYNAVERSITY project worked on this issue and the main results were reported in the deliverable 2.4 “Challenges and

bottlenecks, qualitative study about the needs and impediments concerning networking among stakeholders".

2. Results #1: The roadmap of the different actions to put in place

A roadmap with different short term and mid-term actions has been set up to position the different results from the workshop within a timeline.

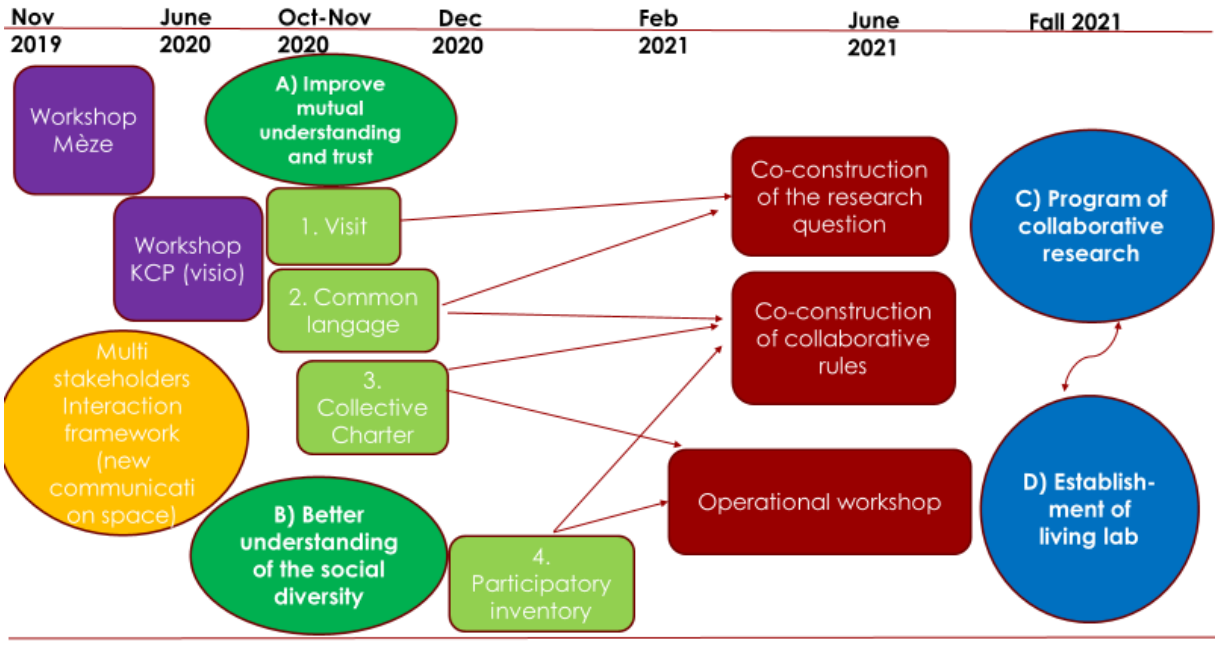
A series of short-term actions are necessary to fulfil different objectives:

- **Increase mutual understanding and trust between different the stakeholders involved**: shared language, visits, regular interactions, elaboration of a common Charter…
- **Better understanding of the social diversity associated with crop diversity**: participative inventory, identification of new stakeholders to be included.

These short-term actions are necessary to implement the long-term objectives identified:

- **Multi-stakeholders Collaborative research program**: genebanks, researchers, NGO, peasants' organizations, that would deal with both technical issues regarding crop diversity and governance dimensions

- **Crop diversity Third Place**: Establish possible virtual or physical places that would act as intermediary organizations in support of crop diversity initiatives, gather the diversity of stakeholders/organizations in a sustained way and offer opportunity to enhance collaborative capacities



ROADMAP		
General objectives	**Actions**	**Specific objectives**
A) Increase mutual understanding and trust between the different stakeholders	1. **On-site visits**	Mutual understanding of the stakeholders and of their practices of use, exchange and crop diversity conservation
	2. Workshop on the definition of a common language	Identify problematic notions and vocabulary and build a common language to better communicate and make more explicit posture et vision
	3. Collective charter	Bring together the collective around common values and governance rules
B) Better understanding of the social diversity associated with crop diversity: participatory inventory, identification of new stakeholders to be included	**4. Participatory inventory**	Broaden if needed to new actors and identify potential and strategic collaborations
C) Program of collaborative research in connection with evaluation activities with crop diversity maintained in the ex situ collections	**5. Co-construction of research questions, protocol and rules of collaboration**	1) Renew/enrich the practices of conservation, regeneration, multiplication, distribution within the CRB in the perspective of an openness to a broaden diversity of stakeholders 2) Build common rules allowing a real cooperation
D) Outlines and terms of reference of possible living labs to facilitate collaborations between research, ex situ collections and diversity of crop diversity's stakeholders (farmers)	**6. Thoughts on the limits about governance in the actual scenery of dynamic management of crop diversity**	Deepen the thoughts on the governance on crop diversity in the institutional and reglementary sectors
	7. Creation of a third place for crop diversity	Set up a dynamic of collective experimentation on a new mechanism of governance

3. Results #2: Organization of the first on-site visits

The first action of the roadmap (action #1) was developed during the 13rd and 14th October 2020, as a visit has been organised in the sites of two participants of the previous workshops: one in the genebank of GAFL INRAE in Avignon in the department of Vaucluse and one in Jardin'Envie, a farmers' seed producer in Bourg-lès-Valence, in the department of Drome, both situated in the South of France.

The genebank's objective is to maintain the genetic integrity of the varieties and distribute genetic material in accordance with the sanitary norms. The farmers' seed producer objective is to promote use of landrace seeds and plants for home and market gardeners.

This visit was an opportunity to share the different visions and practices of two different actors of the crop diversity management community. It was also an opportunity to get explanations and clarification about the different terms used by these two groups. It has opened discussions about concrete observations made in the field and allowed to broaden the scope of scientific disciplines involved in crop diversity management beyond genetics (e.g. agronomy, plant's health).

The following table highlights the specificities and the differences between the two stakeholders.

Table of comparison of the two stakeholders

	Genebank of GAFL (INRAE) of AVIGNON	**JARDIN'ENVIE (Bourg-lès-Valence)**
Governance	Center of Biological Resources that depends on the Research Unit GAFL INRAE Funding dependent on call for proposals Scientific Council of users (SCU)	Cooperative based on multi-layered governance with different circles of responsibility
Objective and missions	Maintain the genetic integrity, sanitary quality, and germination capacity of the material in the collection in order to adapt to quality standards and provide reliable genetic material	Create an environment conducive to the work of farmers' seed producer in a logic of coevolution. Promote landraces and threatened know-how
Values	Curiosity, fulfilment, expertise, quality, efficiency, integrity, impartiality, mutual aid, trust, solidarity	Coevolution, respect for life, sharing, manage the diversity as a commons, democratic management.

Main constraints	Lack of sustainable funding Lack of informatics support for data management Lack of staff	Global unfavourable legal and administrative context Difficulty to generate enough self-funding due to the governance and the refusal of IP-based business model (patents, PBR).
Stakeholders benefiting from the diffusion	Public and private foreign researchers; Private R&D institutes; Associations, home gardeners, alternative producers	Home and market gardeners
Stakeholders 's network	National and international networks focused on genetic resources; Close links with public and private research' s stakeholders	Multifaced collaboration's networks going beyond seeds with strong local dimension; farmers' seed network
Species	Tomato, eggplant, pepper, lettuce, melon	Vegetable varieties, grass family, flowers varieties
Type of varieties	Pure lines, hybrid varieties, mutants, crop wild relatives, landraces	Landrace varieties, farm seeds

	
Visit of the pepper collection in the genebank of Avignon (INRAE)	Visit of a cultivated field in Jardin'Envie (Bourg-lès-Valence)

4. Results #3: Synthesis on the concept of third place and first considerations for a third place on cultivated diversity

The second action (action #7 from the road map) that was initiated within this activity of the DYNAVERSITY project consisted in continuing the reflection on the concept of third place and the type of opportunity that it could constitute concerning the dynamic and multi-actor's management of crop diversity.

By circumventing blockages that can arise from organisations such as genebanks in which professional identities and specific structures of actions have been established for a long time,

the third place could constitute a good solution: as a collective (multi-stakeholder) space, it would allow to not only acknowledging the coexistence of the diversity of the practices of crop diversity management but also enabling continuous interactions and collaborations between its members. In order to study the obstacles and opportunities of third place, we first define the concept of third place, then we introduce the different existing typologies and models and to finish, we adapt and apply an analytical grid to outline the main characteristics of the third places by exploring different examples that illustrate their diversity. This approach provides the first elements to define what could be a potential crop diversity third place.

The concept of Third place: definitions

The third place is an initial concept invented by Ray Oldenburg in 1989: it is an intermediate place between home and working place enabling the expression of informal public life and community-based in a context of desocialization of peri-urbans areas (Oldenburg, 1989). Regardless of differences, a series of characteristics characterizes a third place:

- Neither private nor public, it is a neutral space between home and workplace (Besson 2013, Vallat 2017);
- A common space that results from a collective project beyond the aggregation of individual projects (Azam, Chauvac all, 2015). It usually takes an organizational and original form of commons as described by Hess and Ostroms (2011) enabling the generation of knowledge, social learning process, networking, and the exploration of the unknown part inherent to the act of creation (Vallat, 2017, Burret, 2013);
- Shared common values clearly displayed, generally humanist, linked to a collaborative economy, sustainable development, social and solidarity economy (Genoud, Moeckli, 2010); and
- An attitude of sharing and openness within the third place but also in relation to the outside world (Genoud, Moeckli, 2010). It is usually opened to the public without any restriction, in particular with respect to the activity undertaken (Oldenburg, 1989). It connects between local stakeholders and external networks (Besson, 2017) and aims at replicating the model through open source and open innovation approaches (Genoud, Moeckli, 2010).

Different typologies

Different typologies exist some differentiate the third-places from their sector of activity (activities and services such as coworking, handcraft places, agricultural places, educational places). Others seek to align third-place on an axis more or less community-centric or techno-centric that allows, for example, to differentiate fab labs from hackerspaces (Lhoste, 2020). Prima Terra offers a typology that positions third places according two axis: level of commodification (market goods, common goods) and the finality of the third place (social issue or business issue). (see Annex).

The concept of third place is flexible and could take several forms:

- Coworking spaces which are physical spaces allowing a collective dynamic between different users from a diversified profile and the implementation of collaborative relations, open and sustainable.
- Living labs are laboratories that enable collective construction of innovative projects (Dubé, 2014) responding to the needs of the users themselves (Lehmann, 2015). They do not necessarily need a physical place to achieve their goal.
- Fab labs are conceived as spaces making available to everyone machines and tools allowing fast fabrication of objects and digital innovations with a logic of "dot it yourself" and "dot it with others" and fosters the democratization of collaborative practices that can lead to business activities.

Different inspiring models

The association Tiers-Lieu Nomade ("nomadic third-place") was funded by C. Balai, a French researcher in a social innovation laboratory for research action (LISRA) to experiment the concept of "third place" in different places through specific events and meetings. The association uses different workshops and artistic performances to generate new collaborations and to encourage transformative changes locally.

The "Localos" has a similar approach of acting at different locations by helping local stakeholders committed to the ecological transition to set up local development projects through different kinds of activities: experimentations, training, conferences, round-table discussions, research and development, strategic support, etc.

The SCIC Tetris aims at contributing to the ecological and territorial transition thanks to research and innovation. It relies on an applied research center, the Godin Institute, and a project incubator. It supports multi-membership, multi-partnership, and socio-economics activities. TETRIS is at the same time a place to live and to work, to innovate, an associative café, a fablab, and a shared garden. Its governance is diversified and unique, with different stakeholders from varied profiles (researchers, designers, business, artists, mediators) and in which research is the backbone to serve a political project.

The Laboratoire Hors-murs ("lab without walls") aims at testing empirically the links between science and society. It has been initiated by the association Biodiversity Exchange and Diffusion of Experiences (BEDE) in collaboration with the Citizenship Sciences Foundation, and two research units (CEFE and the UMR 'Innovation') to set up different collaborative and transformative research projects in different regions (France, Algeria, Benin). The objective was to create new public spaces of linking researchers and peasants around agroecology and crop diversity and a means for integrating farmers to research.

The "Boutique des Sciences" are structures that link research and civil society. They allow actors from civil society to access knowledge, research findings and new technologies and

researchers to exchange with civil society and respond in a bottom-up way to the needs formulated by practitioners in the field. It is a democratic tool of production of scientific knowledge, at the interface between research and civil society.

Potential models of crop diversity third place

Different types of third places could potentially suit the need of the collective and could be imagined, without prejudging the choice that would ultimately been made by the group gathered within this initiative.

First, it seems that possible Third place linked to the workshop "Revisiting the role of genebanks in the institutional landscape of dynamic management and conservation of crop diversity" are close to the co-working or living lab models. It would set up collaborative, sustainable and open relationships between different stakeholders and help generating innovative projects that respond to the needs of the civil society.
It would not necessarily be a fixed place but rather a mixed and common place resulting from a collective project between farmers' organizations, researchers and genebanks managers and other stakeholders. It would foster interactions and implement new ways of collaborating for generating knowledge from an evolutionary perspective about crop diversity.

Another way of imagining the third place is to consider the following three factors: i) the existence or not of a physical place; ii) the *ex nihilo* creation of a new structure or the establishment within an existing structure; iii) the focus placed on research activities. Different options could be hence envisaged:

- Third place dedicated to collaborative research not tied up to a physical place:

- **a new living-lab for research action on crop diversity**: it would be built around a common framework on crop diversity in which various members, distributed "off-site laboratory", and real-world experiments are gathered. The 'Boutique des sciences' could be a suitable model to host such a living-lab and to strengthen the link between research and civil society on agrobiodiversity.
- **a nomadic living-lab:** it would gather different places and stakeholders around the organization of regular events allowing new collaborations and problem-solving in each location.

-Third place with a physical place and integrating different components beyond research activities

- a new third place devoted to crop diversity with different components: agricultural, pedagogic, economic, social, research.
- a third place linked to an existing structure: it would build bridges between the world of seed and other major topics in order to have a better impact on society.

Those different options could also be combined and are not necessarily mutually exclusive. An analytical grid with different criteria has been developed to facilitate the discussion about these possible options.

An analytical grid as a tool to collectively build the crop diversity third place

The existing theory of common capabilities

The creation of third place is usually building upon the theory of commons (Ostrom & Hess, 2011). Observing a lack of social justice dimension in the theory of Ostrom, Geneviève Fontaine proposes to combine this theoretical framework to the one on capability by Amartya Kumar Sen.

According to the social justice theory of Sen, a capability or "substantial freedom" is an effective possibility for an individual to choose between different life conditions (ex: to move, to have access to education).

The intersection between those two theories helps conceiving commons capabilities as a tool of sustainable development used to accompany local projects of social and solidarity economy. The capability's commons highlight the ethic dimension and the commoners' motivation.

This grid includes four dimensions: the "Community" dimension, the "Resource" dimension, the "Accessibility" dimension, and the "Governance" dimension. For each of these dimensions, sensors of 'capability commons' are chosen as criteria that could be assessed according to a scale from 0 to 3. We adapted this grid to the specific framework of the crop diversity third place and used it to assess the different projects of third-places linked to the KCP workshop.

The adaptation of the grid to the crop diversity context

The following grid has been directly inspired by the analytical grid of the sensors of the common capabilities of Geneviève Fontaine with a simplification and an adaptation to the specific challenges of crop diversity's third place. Besides, as a matter of simplification, the « Accessibility » dimension has not been covered in order to simplify it: only one sensor of this specific dimension has been included in the "Resources" dimension.

Without being exhaustive, this analytical grid aims at helping collective thinking about the design and implementation of the project of third place.

<u>The community dimension</u>

The usual link within crop diversity collaboration networks is the resource (e.g. genetic resources or a specific species or variety of interest). Here, the focus is rather on the collective and human dimension. The delimitation of the community and the degree of heterogeneity of the community are two important criteria. Depending on the motivations of the group, it could be interesting to broaden the circle to other stakeholders. However, it appears

necessary not to move too vast as this enlargement could lead to a loss of confidence within the group.

The « Resource » dimension

The "Resource" dimension applies to the varieties conserved and cultivated by the stakeholders as well as to the immaterial knowledge and other resources (technological, pedagogical, etc) associated to crop diversity.

The "Governance" dimension

The "Governance" dimension covers the implementing rules and the internal organization (how external actors can be involved in decision making). The governance must be defined and adapted to the functions of the living lab. As the main objective is to facilitate mutli-stakeholder collaborations (researchers, peasants, genebank managers or other stakeholders of the crop diversity), it is necessary to ensure that each stakeholder is able to participate in a democratic way. A Charter could be a first milestone for actors to make more explicit their common values and motivations. It is also necessary to ensure the real possibility for the commoners to freely participate to the decisions. The level of inclusiveness of the governance to the different stakeholders is also an important criteria to consider. This possibility of openness must be accompanied by safeguards to avoid that external actors jeopardize the initial willing of the commoners. The degree of horizontality of decision making is finally another important criteria.

Other issues to consider

- The spatial scale

Usually, third places tend to be anchored in a defined territory. However, due to the presence of multi-stakeholders originating from different countries, the question of the scale arises. The different nodal points and connections between different stakeholders could cover various scales (farm, local, institutional, national, or international). If the third place is intended to be implemented at a local scale, the question of the replicability appears crucial in order to cover different contexts and possibly implement a third-places' network.

- The question of the economic model

Different sources of funding can be contemplated: public subsidies (European, national), private funding (foundations, companies, particulars), self-generated incomes from the activities of the third places (trainings courses for example). A diversity of funding appears to be necessary to avoid a too strong dependency on only one source. The objective of the creation of this third place aims at going beyond the short-term logic of research projects.

- A boundary-spanning role

The intermediation role is often critical to coordinate and to accompany the collective dynamics (Lhoste, 2020) and to « connect, frame, ensure the transfer of knowledge, and explore new options" (Berthet and Hickey , 2018).

Conclusions

Deliverable 3.3 highlights the results of two workshops between actors from the conservation and breeding communities who are not used to discuss together. The main needs identified collectively to foster collaboration within this heterogeneous group were recorded in a roadmap structured around four key objectives:

A. Increase mutual understanding and trust between the different stakeholders;

B. Better understanding of the social diversity associated with crop diversity: participatory inventory, identification of new stakeholders to be included;

C. Develop program of collaborative research in connection with evaluation activities with crop diversity maintained in the ex situ collections; and

D. Define outlines and terms of reference of possible living labs to facilitate collaborations between research, *ex situ* collections and diversity of crop diversity's stakeholders (farmers).

This document reports on two roadmap activities that have already been initiated. A first on-site visit was organised in mid-October 2020 in France. Then, in order to circumvent potential institutional obstacles within the gene banks, the crop diversity living lab or third place is studied. The concept, the different forms, typologies, and inspiring models are described. From this study, different options of implementation of the third place are contemplated and a grid with different criteria, based on the theorical framework of a cross application of the theory of the commons and the theory of capabilities is proposed as a tool to accompany the collective construction of the third place.

First results of this activity were presented to and discussed with the board of the European Coordination of Let's Liberate Diversity and some DYNAVERSITY partners during an online workshop organised on the 16 October 2020.

This activity was joined to the CoEx project (Foundation Agropolis, 2017-2021). It is considered as the first step of a long term process as it is now necessary to continue to work collectively on the next steps, strengthening trust and understanding among participants. The next event in this process will take place in the fall of 2021. The objective of this new event is to share the experiences of different third places in order to refine the third place model that could best correspond to the actors of the dynamic management of cultural diversity.

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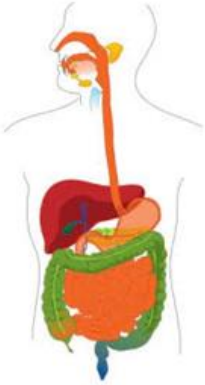
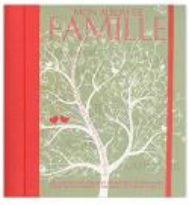
Annexes

Annex 1: the different pictorial boards



1. Decentralized genebank

2. Genebank as a common



Annex 2: The community dimension

Sensors	Objective	Level O	Level 1	Level 2	Level 3
Delimitation of the community	**Define the degree of openness of the community**	**No rules**	**Closed community** (limited to the stakeholders of the workshop)	**Half-opened community** (possibility of entrance and exit under conditions and acceptance of others commoners); openness to others stakeholders having a link with crop diversity (gardeners, nurseryman, regional conservatories)	**Opened community** Possibility of entrance if acceptation of rules and possibility of exit without constraint (openness to stakeholders not having or having an indirect link with agrobiodiversity (ex: conservators, museums).
Heterogeneity of the community	**Appreciate the diversity of stakeholders and the interdependence**	**No aware link with the resource**	**Homogeneity of the stakeholders** that have a similar link with the resource (ex: the genebank administrators)	**Limited heterogeneity** at least two types of different actors (having different links with the resource) ex: researchers, genebank managers, peasant groups	**Research of a strong heterogeneity of the group:** more than 2 types of different actors (having different links with the resource and interlinkage between them) ex: researchers, genebanks managers, peasants' groups and other stakeholders

Sensors	Objective	Level O	Level 1	Level 2	Level 3
Motivations	**Approach the basis of the joint action and the type of collective interest pursued by the collective**	**Individual interest only** (ex: new variety to cultivate or to maintain)	**Mutual interest in relation to the resource** (ex: exchange of varieties and exchange of scientific or empirical knowledge)	**Located collective interest** (ex: reintroduction of a variety in a particular aera)	**Sharing of a collective interest and universalist but located** (ex: conservation of the located diversity in different regions)

The "Resource" dimension

Sensors	Objective	Level 0	Level 1	Level 2	Level 3
Diversity of the species	**Measure the diversity of the concerned measures**	No limitation of the resources	**Intraspecific diversity:** just one species of different varieties	**Interspecific diversity:** Different species with a family of species, different varieties for each species	**Different families, species, different species and different varieties for each species**
Location of the resources	**Awareness of the system of resources where the crop diversity is located**	It does not exist a link with other resources or the actors don't have awareness of it	The management of the commons generates or reveals other resources (E.g. immaterial expertise, technological or pedagogical resources)	The management of the commons of the resource generates or reveals resources that are managed in common (ex: immaterial expertise, technological and pedagogical resources) but also animal races, water, ground	The collective adopts a systemic approach of resources and relations between human and non-human in the collective or outside of the collective

Sensors	Objective	Level 0	Level 1	Level 2	Level 3
Rules concerning the resources	**Grasp the adequacy of rules, resources' characteristics and objectives pursued by « Commoners »**	Rules not allowing the conservation or the coevolution	Rules allowing the conservation and the coevolution of the resources	Rules allowing the conservation and the coevolution of the resources + reduction of the inequity of the access to varieties (ex: guaranty the access to farmers, to conserved varieties in genebanks)	Rules allowing the conservation or the coevolution of the resources + the reduction of the iniquity of access to the varieties + the protection against appropriation by copyrights and reject of selection technics of non-controlled biotechnologies in application of the principal of the precautionary principle
Liberty of opportunity of resources (stock et flow)	Approach the accessibility to the stock or the flow to resources managed in common	Not a research of a sustainable access to the stock or to the flow of resources	Rules ensuring a formal right of access to certain categories of actors or persons and to the flow of resources with rules of exclusion from certain category of persons	Rules ensuring a sustainable access to the stock and to the flow of resources considering the categories of persons the most powerless to the resource	Research of a sustainable access and effective access for all to the stock and flow of resources by actions on the factors of conversion

The “Governance” dimension

Sensors	Objective	Level 0	Level 1	Level 2	Level 3
Freedom in the decision making	**See how the stakeholders of the community take part in the way the stakeholders of the community participate in making the decision**	Spaces of concertation and non-accessible decisions	Presence of different level of choice. Only a few participate in the decision on the rules of use and sampling / additionality	Presence of different levels of choice options, spaces of concertation and of deliberation on rules opened to the whole commoners	Presence of different levels of choice options, spaces of concertation and of deliberation on the rules with real possibilities of voice and exit for the whole commoners
Degree of horizontality	**Measure the degree of horizontality of the governance**	No predefined rule	Classic governance (Managing board + general assembly + desktop) with a pyramidal and vertical system	Classic governance with the implementation of a horizontal measure of governance (ex: organisation in circles)	Horizontal governance complete (E.g. sociocracy and holocracy)
Degree of openness	**Measure the openness of the governance of the plurality of the actors**	No measures.	Opened governance only for a type of defined actors	Multi-actors participative governance with certain measures of governance	Complete multi-actors shared governance
Degree of territorial anchor (if physical place established)	**Measure the links with the stakeholders of the territory**	Physical place established without relations woven with the stakeholders of the territory	Connections and informal relations with the geographical and sectorial proximity stakeholders	Real partnerships established with the stakeholders of the territory exceeding the geographical and sectorial proximity only	Real partnerships established (…) and driving role of the collective in a governance at the territorial scale