

# DYNAVERSITY

## *DYNAmic seed networks for managing European diVERSITY*

Grant agreement n°: 773814

H2020 – Coordination and support action

### **D2.4**

## ***Report on challenges and bottlenecks to networking***

**Due date:** M36 (November 2020)

**Actual submission date:** M27

**Project start date:** November 1<sup>st</sup>, 2017 **Duration:** 42 months

**Work package concerned:** WP1

**Concerned work package leader:** ULG

**Dissemination level:**

- PU: Public (must be available on the website)**
- CO: Confidential, only for members of the consortium (including the Commission Services)**
- CI: Classified, as referred to in Commission Decision 2001/844/EC**

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## Foreword

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The DYNAVERSITY project focuses on the creation of a network or platform for developing integrated *in situ/on-farm* conservation strategies for plant genetic resources for food and agriculture (PGRFA). The main focus and innovative aspect of the project is the proposition to grant a strong role, alongside that of scientific and policy actors which have long been working together, to social actor organisations across different domains (conservation, farming, gardening, breeding, and alternative marketing). The project strives to better connect all these actors and foster new partnerships, interactions and synergies, connecting each of these actors to the general public.

Relevant social actors and organisations were identified and described through 21 case studies carried out in WP2, in which the governance systems of the cases were also analysed. The present deliverable describes the challenges and bottlenecks to establishing an overarching network among these actors and science and policy stakeholders, for improving the *in situ* conservation of agricultural and natural biodiversity in Europe.

The present document builds upon information from other deliverables: D1.1 (List of Concepts), D1.2 (Report presenting the EU context), D1.3 (Analytical framework), D2.1 (List of case studies), D2.2 (Case studies reports) and D2.3 (List of best practices).

This document follows the template provided by the European Commission in the Participant Portal. This deliverable is based on and complies with the following reference documents: the GA, Annex I and Annex II (downloadable from the participant portal), and the Consortium Agreement (CA).

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## Introduction

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As recently summarised in Kell et al. (2017), there are a number of bottlenecks which affect the *in situ*/on-farm conservation of Plant Genetic Resources for Food and Agriculture (PGRFA) worldwide, among which:

- There is limited financial, institutional and policy support for *in situ* conservation;
- *In situ* conservation is difficult to promote and manage;
- Infrastructure and trained human resources capacities are lacking;
- Conservation and dynamic management on-farm are not recognised;
- There is no targeted or active conservation of crop wild relatives (CWR) in existing protected areas; and
- There are restrictions on accessing material conserved *in situ*/on-farm<sup>1</sup>.

In Europe, the scientific community has long been aware of limitations such as those listed above. In response, and recalling Article 5.3 of the Treaty of Functioning of the EU (“*the conservation of genetic diversity [...] calls for coordinated, concerted and adequately funded actions, which cannot be organised by the member states themselves in a satisfactory manner*”), the need for a new European Plant Germplasm Conservation Agency has been suggested, based on the ECPGR model and managed directly by the EU, possibly similar to what exists in the USA (Frese et al., 2016).

For *in situ*/on-farm conservation in particular, the idea to develop a European network emerged already over 10 years ago; the idea has been taken up within international policy fora, such as the ECPGR, the FAO Commission on CGRFA and the International Treaty on Plant Genetic Resources for Food and Agriculture (Maxted and Kell 2009; Negri et al. 2014; Maxted et al. 2015).

The scientific foundation of an *in situ*/on-farm network is based on the identification of specific conservation sites (natural or farmed) where the number, the diversity or the uniqueness of CWR and/or landraces is particularly high (as in Negri et al. 2014), and on the establishment of a network of such sites and actors therein. The evolution of this approach can be traced through the different EU research projects that funded its design and application. The first such project was the European Crop Wild Relative Diversity Assessment and Conservation Forum (2003-2005, <http://www.corfugreecehotels.com/pgrforumorg/>), which was followed in 2007 by AEGRO (An Integrated European *In Situ* Management Work Plan: Implementing Genetic Reserves and On-farm Concepts, <http://aegro.julius-kuehn.de/aegro/>). Both were funded by the DG AGRI within the framework of Council Regulation (EC) No

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<sup>1</sup> Issues which complicate ABS schemes for *in situ*/on farm genetic resources have been tackled in manual 3 of the Dynaversity technical manual series on Community Seed Banks.

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870/2004. The subsequent project PGR SECURE (2011-2014, <http://www.pgrsecure.org>) was funded by the EU Seventh Framework Programme. These projects, managed by research institutions within the ECPGR, were mostly devoted to the consolidation of a common scientific methodology for the identification and selection of ideal sites for PGRFA conservation, both *in situ* (for CWR) and on-farm (for landraces). For CWR, the idea of “genetic reserves” was developed, as areas where specific policies for PGRFA conservation were to be defined and applied; for landraces, “Most Appropriate Areas” were defined as those where the diversity of landraces was highest. Networking was “simply” seen as a tool for joining a number of these sites and the individual actors operating inside them at national, EU or worldwide levels.

These ideas have proven difficult to implement. A number of issues in particular complicate their practical application in real-world contexts :

1. How can conservation sites as those mentioned above be legally defined in their existence and operation, when they do not fall within the protected area categories defined by the European Union (e.g. natural parks)? How to define and manage them when they fall (very often) on private land owned and managed by individual land owners or farmers?
2. In particular for landraces, how to ensure that such a “static” approach to conservation is compatible with the dynamic nature of agricultural management and farmers’ innovation, whereby the process of PGRFA conservation is influenced by the farming environment’s social and economic contexts?
3. While the above projects produced policy recommendations and/or conducted stakeholder consultations, they didn’t actually engaged with social actors and collective organisations from the territories for implementing conservation/management efforts. As admitted in the project recommendations themselves, the political and legal steps that need to be taken to establish genetic reserves and networks were not part of the methodology.

Research carried out in recent decades supports the need to frame on-farm conservation not only genetically and biologically, but also and most importantly socially and economically. Many authors underline the role of social organisations (e.g. farmers’ and gardeners’ organizations, consumer groups, seed savers and their networks, community seed banks) in maintaining in a dynamic manner all kinds of PGRFA on-farm (Da Via, 2012; Pimbert, 2011; Corrado, 2010; Dogliotti et al., 2014; Koutsouris, 2012; Bocci & Chable, 2009; Peschard et al., 2020; Balint and Aistara, 2018). The outcomes of the two Preparatory Actions on EU plant and animal genetic resources in agriculture requested by the European Parliament, which ran between 2013 and 2018 ([www.geneticresources.eu](http://www.geneticresources.eu)), further reinforce the importance of supporting partnerships and cooperation between all actors along supply chains, and

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of linking them with scientific stakeholders and decision makers. The basic assumption behind this research and these policy recommendations is that genetic erosion is an economic/political/technical process, and hence should be addressed through a dynamic and integrated approach, which goes beyond the mere identification of diversity-rich areas or individual custodian farmers.

However, the conclusions of the two Preparatory Actions, especially in terms of how and to what extent to involve social actors and encourage their interactions with institutional levels, have not been fully endorsed and translated into active policy measures.

Hence, what is still missing in the approaches which have until now tackled the idea of an *in situ*/on-farm network in Europe, is the match with social actors, particularly those already working collectively on PGRFA and often already organised in some form of multi-actor network, each in their own reference territory and community.

## **1. Existing networks and organisations**

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DYNAVERSITY mapped the different organisations already operating at EU level in the field of PGRFA (on-farm) and CWR conservation (*in situ*). As part of WP2, 21 case studies<sup>2</sup> were developed (nine of which were later summarised in practice abstracts), representing the diversity of actors involved. Three of the case studies focus on existing networks at EU level which target PGRFA (the European Coordination Let's Liberate Diversity! - ECLLD, and the SAVE Foundation), and CWR (the EUROPARC Federation, which gathers environmental protection authorities and Protected Areas in 40 European countries)<sup>3</sup>.

The case studies describe the activities and modes of operation of all organisations, as well as their governance systems. Two case studies focus on non-EU experiences, namely the Organic Seed Alliance (OSA) and Seed Savers Exchange network from the USA, to gain some insight on the operation and governance systems of organisations in different contexts.

The map below summarises the categories of organisations mapped by the project as well as others which directly or indirectly influence the management of PGRFA in Europe (scientific networks and platforms, seed companies or associations, other social and activist organisations) and which could be relevant for the establishing an overarching European platform for agricultural biodiversity conservation.

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<sup>2</sup> Case studies and PA can be found at: <http://dynaversity.eu/case-studies-full/>

<sup>3</sup> <https://liberatediversity.org/>; <http://www.save-foundation.net/en/>; [www.europarc.org](http://www.europarc.org)

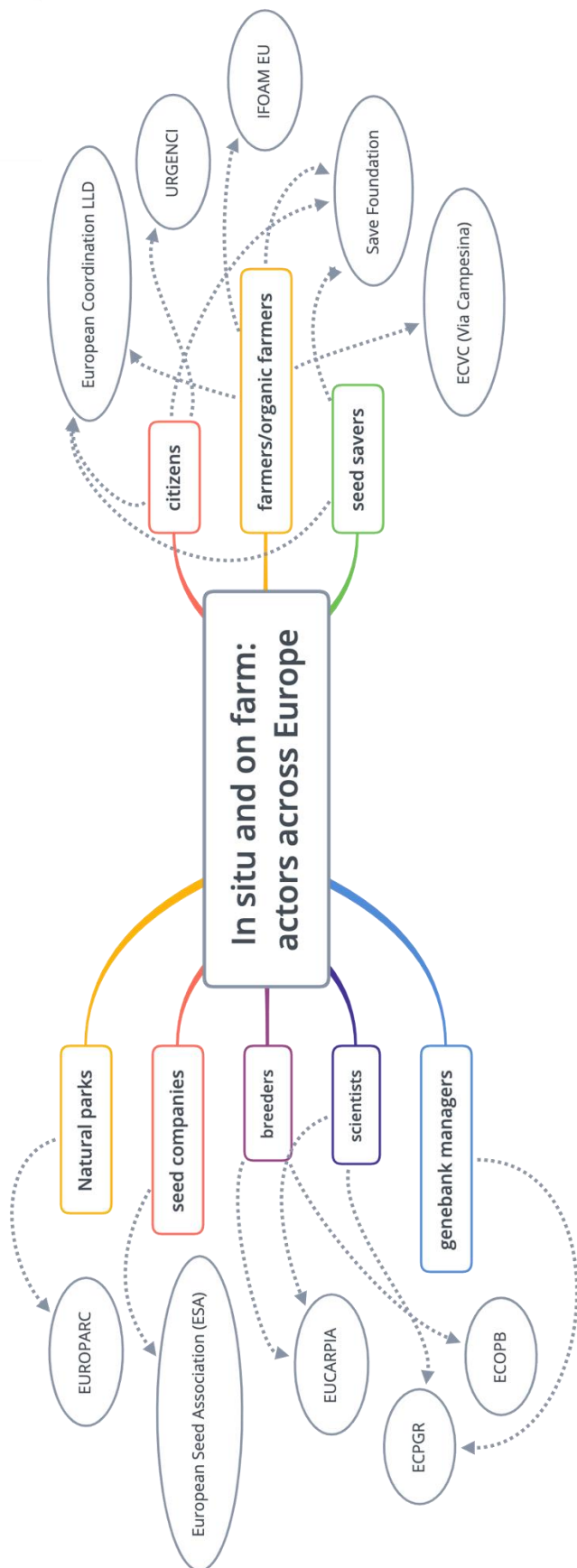


Figure 1: *in situ* and on farm actors in Europe. In color the different actors and in grey the related EU networks/organisations already existing. The arrows indicate the organisations where the different type of actors are represented.

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In addition to the case studies, DYNAVERSITY created a stakeholder platform (the Sharing Knowledge and Experience Platform – SKEP) to involve additional relevant actors from the scientific, policy and social world in the project’s activities. SKEP members are: Regine Andersen (Norway, Fridtjof Nansen Institute), Catrina Fenton (UK, Garden Organic), Christine Frison (Belgium, Université Libre de Bruxelles), Waltraud Kugler (Switzerland, SAVE Foundation), Rachel Lagiere (France), Lorenzo Maggioni (Italy, ECPGR), Jennifer Mc Connell (Ireland, Irish Seed Savers), Pedro Mendes Moreira (Portugal, Coimbra Politecnic), Bert Visser (the Netherlands, OXFAM-NOVIB).

**BOX 1 . The European Coordination Let’s Liberate Diversity!**

The EC-LLD was established in 2012 by a number of organisations which had been interacting since 2005 on themes related to the dynamic management of agricultural biodiversity in Europe. The intention behind establishing a coordination was to strengthen the collaborative management of cultivated biodiversity across the continent and to establish a more formalized space for mutual sharing of knowledge and approaches. The main objective of EC-LLD is to be an open and fruitful space for exchanging knowledge and experiences among its members, fostering their local actions and encouraging common positions. Operating under the shared concern that our food systems are too uniform, and the conviction that promoting biodiversity is key for achieving food sovereignty, the EC-LLD aims at:

- Promoting and developing farmers' seeds on organic and biodynamic farms;
- Exchanging and disseminating knowledge and skills associated with farmers' seed;
- Promoting a legislative framework on agricultural biodiversity which recognises the rights of farmers, hobbyists and small seed companies;- Encouraging participatory and decentralised breeding and research.



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### **BOX 2. The SAVE Foundation**

The Safeguard for Agricultural Varieties in Europe – SAVE - foundation was established in 1993. Its objective is to maintain the existing diversity of both animal breeds and cultivated varieties. SAVE's work links the conservation of animal and plant agro-biodiversity to rural development in marginal areas and traditional agro-ecosystems (TAES), where genetic resources are an important option for local populations to improve their incomes and for sustainable landscape management. SAVE is structured as a foundation under Dutch law. A board of Directors' and an executive committee manage the foundation. At the same time, for improving their access to funding and strengthening advocacy actions, SAVE has created support associations in Germany and Switzerland. In addition to the board, there is a committee in charge of project monitoring and a council of cooperating partners. This council is composed of experts on animal breeds, plant varieties and marketing who can advise the Foundation on technical issues. Three employees ensure networking between the partners, based either at the Network Office in Wageningen (Netherlands), or the one in St. Gallen (Switzerland). SAVE' collaborates extensively with governmental and intergovernmental organizations, universities, gene banks, farmers' associations and other NGOs promoting conservation. SAVE's funding is divided between European subsidies and membership fees. In terms of subsidies, SAVE does not want compete in running for competitive tenders with its members, which makes this line of funding more difficult to pursue. SAVE seeks to maintain an efficient structure, aligned with its objectives, with the scope of its programs and with its positioning in the European landscape of agrobiodiversity actors. SAVE brings together 23 national organizations and 2 regional organizations spread across 16 European countries. SAVE participates (as leader or partner) in projects across different geographical areas (the Balkans, the Alps, the Carpathians and the Mediterranean). SAVE organises a regular annual meeting of the network's members, lasting three days and bringing together 30 to 50 people. Farmers are invited, but are not very numerous, possibly because of their limited time availability and their limited confidence with English.

### **BOX 3. The EUROPARC Federation**

The EUROPARC Federation is a not-for-profit, non-governmental-organisation, whose financial support and expertise comes from membership fees, partnerships and funders. The organisation was created *by* members *for* members, to support Protected Area management in both its policy and practice, contributing to highlighting the value and benefits of Protected Areas across Europe in promoting sustainable development. Members are mostly natural parks, national environmental agencies, national and regional governments, a few NGO's and individuals. Members meet once a year during a conference and the general assembly, the latter being the decision making arena for the Federation.

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## 2. Challenges and bottlenecks for an overarching platform

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The study by Kell et al. (2017) cited in the introduction, concludes that “*the global PGRFA community needs to come together to lobby for policies and long term support*”. The analyses conducted within DYNAVERSITY, however, suggest that this depiction may be somewhat simplified and that a PGRFA community capable of implementing real world *in situ*/on-farm conservation actions under a common umbrella does not (yet?) fully exist. Indeed, previous projects and efforts towards creating a network of conservation actors or sites have tended to stall soon after the methodological definition stage, perhaps because of a difficulty to truly engage with and leverage real world social and territorial dynamics. Furthermore, we believe it not to be a mere lobbying effort which is needed, but rather the co-design and co-application of conservation and sustainable use strategies among social, scientific and policy actors.

Social actors and their multi-dimensional *in situ*/on-farm initiatives may provide the key for embedding scientific recommendations and methods into social contexts. Furthermore, collective social organisations ensure a longer-term engagement than individual farmers in PGRFA conservation and management efforts. As testified by our case studies, many of these organisations adopt innovative and integrated (CWR/PGRFA) approaches which make agrobiodiversity management more dynamic and integrated in real-world seed and food systems (e.g. participatory breeding, community seed banking, alternative marketing schemes, etc.).

The bottlenecks identified by the project which hamper the engagement and integration of social as well as scientific and policy actors in an overarching platform for *in situ*/on-farm conservation are described as follows:

- Identifying and bringing different actors (social, public, institutional, private) together, considering and overcoming their often divergent visions and governance systems;
- Managing interactions between on-the-ground actors and institutions, whose understanding of social dynamics is limited since they at most deal with unions or lobbyists;
- Developing and implementing public policies which maintain and enhance collective action dynamics, given their paramount importance for the sustainable use of PGRFA on the ground;

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- Developing integrated *in situ* and on-farm strategies, since CWR and PGRFA belong to different scientific and policy domains (environment and agriculture), which do not usually share common plans and programmes. This point emerged clearly in the EUROPARC annual conference in 2019: natural park actors are mostly unaware of the kind of PGRFA conservation work conducted by social actors and their potential for synergies.

### 3. Conclusions

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Over the last 15 years, the idea of networking *in situ* and on-farm sites and actors has been raised and recommended as a means to improve conservation of PGRFA. As discussed, quite a wealth of scientific data justifying and proposing the methodological foundation has been produced. However, further implementation through adapted policy measures and funding has not followed. This stagnation is determining a loss of interest in PGRFA at EU policy level, which should be corrected with realistic and effective propositions. Based on the data gathered in the project, DYNAVERSITY puts forward the idea of constructing an *in situ/on-farm* platform, strongly grounded in the participation of those collective social networks or organisations whose initiatives and innovations are already strongly embedded in territories, social contexts and value chains. Through such a platform, existing networks would be linked with other relevant stakeholders, promoting and facilitating knowledge sharing and co-design of conservation strategies. We believe that this will be a powerful way to concretely improve the conservation and sustainable use of PGRFA on-farms, gardens and in natural managed areas across Europe.

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