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Farmer's Pride

Networking, partnerships and tools to enhance
in situ conservation of European plant genetic resources

Workshop 2

REPORT

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EXECUTIVE SUMMARY

Farmer's Pride is a three-year Community Support Action funded by the European Union under the Horizon 2020 Framework Programme. The project aims to enhance and promote the *in situ* management, conservation and use of plant genetic resources (PGR) in Europe to provide greater diversity for food, nutrition and economic security. Farmer's Pride involves more than 40 national and international organizations representing stakeholder groups with an interest in the conservation and sustainable use of PGR, either as project partners, members of the External Advisory Board or Farmer's Pride Ambassadors.

Building on existing mechanisms for PGR conservation and use – such as Europe's protected area system, farmer and gardener networks, gene banks and community seed banks – the diverse actors involved in the project are working together to establish a European network for *in situ* conservation and sustainable use of PGR. This network will involve both stakeholders (custodians and users of PGR), populations (managed to agreed standards) and sites (specific localities where wild and cultivated PGR are under active conservation management). It will require appropriate operational procedures, governance and policies to ensure its effective functioning and longevity.

Farmer's Pride Workshop 2 was the second of three workshops to provide forums for the PGR conservation and use stakeholder communities to discuss and make decisions on the development and establishment of this European network. Sixty-two participants, representing a diverse range of stakeholder groups, were convened; this report details the workshop proceedings which were carried out in three sessions: 1) Network sites/populations; 2) Network governance, policy and communications; and 3) Roadmap for establishment of the network.

Session 1: Network sites/populations

Workshop Group 1A discussed standards and procedures for CWR sites/populations, with a particular focus on inclusion criteria, management standards and procedures for nomination and adoption in the network. The group proposed a timeline of actions for taking forward the standards and processes for establishment of the network.

Workshop Group 1B considered standards and procedures for landrace sites/populations. In particular, the group concluded that the draft minimum criteria for inclusion of a resource in the network should undergo additional revision and then the management criteria should be modified. They agreed a timeline, but it was noted that the actions cannot be carried out until the broader process to establish the network has been agreed.

Workshop Group 1C looked at promoting and enabling use of material conserved *in situ* in the network, with a particular focus on the elements required for improving access and increasing the use of *in situ* diversity. The group described these elements and how they could be created or improved, as well as considering the roles of the various actors involved.

Session 2: Governance, policy and communications

Workshop Group 2A looked at network governance. Three sub-groups considered a set of questions to identify: which European organizations or agencies could provide the over-arching management to the network; which collaborating organizations should be included in the network management committee; what process should be used for initial inclusion of site/populations in the first 12 months of the network, and; what role the governing body should play in network management.

Workshop Group 2B looked at network policy and advocacy. It identified concrete policy actions that Farmer's Pride constituencies can take to help sustain the European network, including to ensure that there is a direct long-term European commitment to provide the necessary governance for the network to be sustainable.

Workshop Group 2B looked at network communications and stakeholder engagement. They proposed a communications plan (including timeline) to support the establishment and long-term success of the network. Actions included setting up a communications group, setting up a mailing list and sending regular e-newsletters, developing a network website and agreeing a communications plan for the 2020 conference and network launch.

Session 3: Roadmap for establishment of the network

Participants built on the outcomes of the previous sessions to agree a way forward in establishing the network. It was concluded that a public version of the 'White Paper' is needed to engage stakeholders in their country/network. A taskforce will be established to consider the options and produce the draft concept note, in consultation with the External Advisory Board and other collaborators.

A proposal for a stakeholder consultation process was discussed and it was agreed that a clear timeline for the establishment of the network would be produced . It was also suggested that the network establishment process should address a number of issues including political attention and funding, incentives to nominate sites, levels of engagement, building trust and co-ordination of the network.

1.0 INTRODUCTION

1.1 Workshop context

Farmer's Pride is a three-year Community Support Action funded by the European Union under the Horizon 2020 Framework Programme. The project aims to enhance and promote the *in situ* management, conservation and use of plant genetic resources (PGR) in Europe to provide greater diversity for food, nutrition and economic security. Farmer's Pride involves more than 40 national and international organizations representing stakeholder groups with an interest in the conservation and sustainable use of PGR, either as project partners, members of the External Advisory Board, or as Farmer's Pride Ambassadors.

Building on existing mechanisms for PGR conservation and use—such as Europe's protected area system, farmer and gardener networks, gene banks and community seed banks—the diverse actors involved in the project are working together to establish a European network for *in situ* conservation and sustainable use of plant genetic resources. This network will involve stakeholders (custodians and users of PGR), populations (managed to agreed standards) and sites (specific localities where wild and cultivated PGR are under active conservation management). It will require appropriate operational procedures, governance and policies to ensure it functions effectively and is long lasting.

Farmer's Pride Workshop 2 was the second of three workshops providing a forum for the PGR conservation and use stakeholder communities to discuss and make decisions on the development and establishment of the European network. The workshop involved 62 participants (Annex 1) and comprised representatives of the Farmer's Pride project consortium and External Advisory Board (EAB), Farmer's Pride Ambassadors (FPAs), national, regional and international policy-makers, members of the Wild Species Conservation in Genetic Reserves WG of the European Cooperative Programme for Plant Genetic Resources (ECPGR), and other invited experts.

1.2 Workshop aims and structure

The aim of the workshop was to prepare a roadmap (to define objectives, actions, responsibilities and a timeline) to establish the European network during the final year of the project and for its continuity beyond 2020. The workshop comprised presentations and discussions in plenary and WGs within four sessions:

- **Plenary session: Workshop context, aim and objectives**

In the opening session the context, aims, objectives and programme of the workshop were presented. Presentations were given on the Farmer's Pride project, a proposal for the establishment of the European network and perspectives on the global context.

- **Discussion session 1: network sites/populations**

To maximize the diversity of PGR conserved in the network, and to ensure availability and access to germplasm, sites/populations nominated for inclusion will need to meet a set of minimum criteria and be managed according to minimum standards. In this session, proposed inclusion criteria and management standards were reviewed and discussed. In addition, consideration was given to the process of nominating and adopting sites/populations and procedures for accessing the conserved germplasm and guaranteeing benefit sharing from its use. The aim of the session was to come to a consensus on the standards and processes and make a clear proposal for taking them forward for implementation in the network.

- **Discussion session 2: network governance, policy and communications**

This session aimed to: agree on the governance structure required to establish and maintain the network; decide how to embed the network in national, regional and global policy and legal instruments, and; develop a communications plan to engage stakeholders. The session also addressed the policy environment relevant to support crop landrace (LR) growers and put forward recommendations for policy change.

- **Plenary session: Roadmap for establishment of the network**

The aim of the final session was to prepare a roadmap to establish the European network and plan for its continuity beyond 2020: defining clear objectives, actions, responsibilities and a timeline. The session also aimed to get a shared commitment from participants to work together to bring the roadmap to fruition.

Within each discussion session, participants divided into working groups (WGs) to address the specific workshop objectives and re-convened in plenary to report on and discuss the key WG discussion points and outcomes. The WGs were overseen by convenors (Farmer's Pride partners who are task leaders), and each WG (and in some cases, sub-WG) was led by a chair, with a rapporteur recording the main outcomes of the discussions for reporting in plenary.

1.3 Report content

This report summarises the proceedings of the workshop opening session, details the session and WG objectives, summarises the WG and plenary discussions and outlines the next steps in the development of the European network.

2.0 WELCOME AND OPENING OF THE WORKSHOP

2.1 Welcoming addresses

The workshop was opened by Merja Veteläinen, Boreal Plant Breeding, Chair of the Farmer's Pride External Advisory Board, and attendees were welcomed to Santorini by Popi Ralli from the Hellenic Agricultural Organization – DEMETER.

2.2 Project overview and workshop objectives

Shelagh Kell, Farmer's Pride Project Manager, University of Birmingham, gave an overview of the project, summarised the first 18 months' activities and the key outcomes of Workshop 1, and presented the aims and structure of Workshop 2 (Annex 2). She presented the 'narrative' of the project, explaining how all the elements are linked and how they relate to the ultimate goal to establish a 'fledgling' network for *in situ* conservation and sustainable use of PGR in Europe (Figure 1).

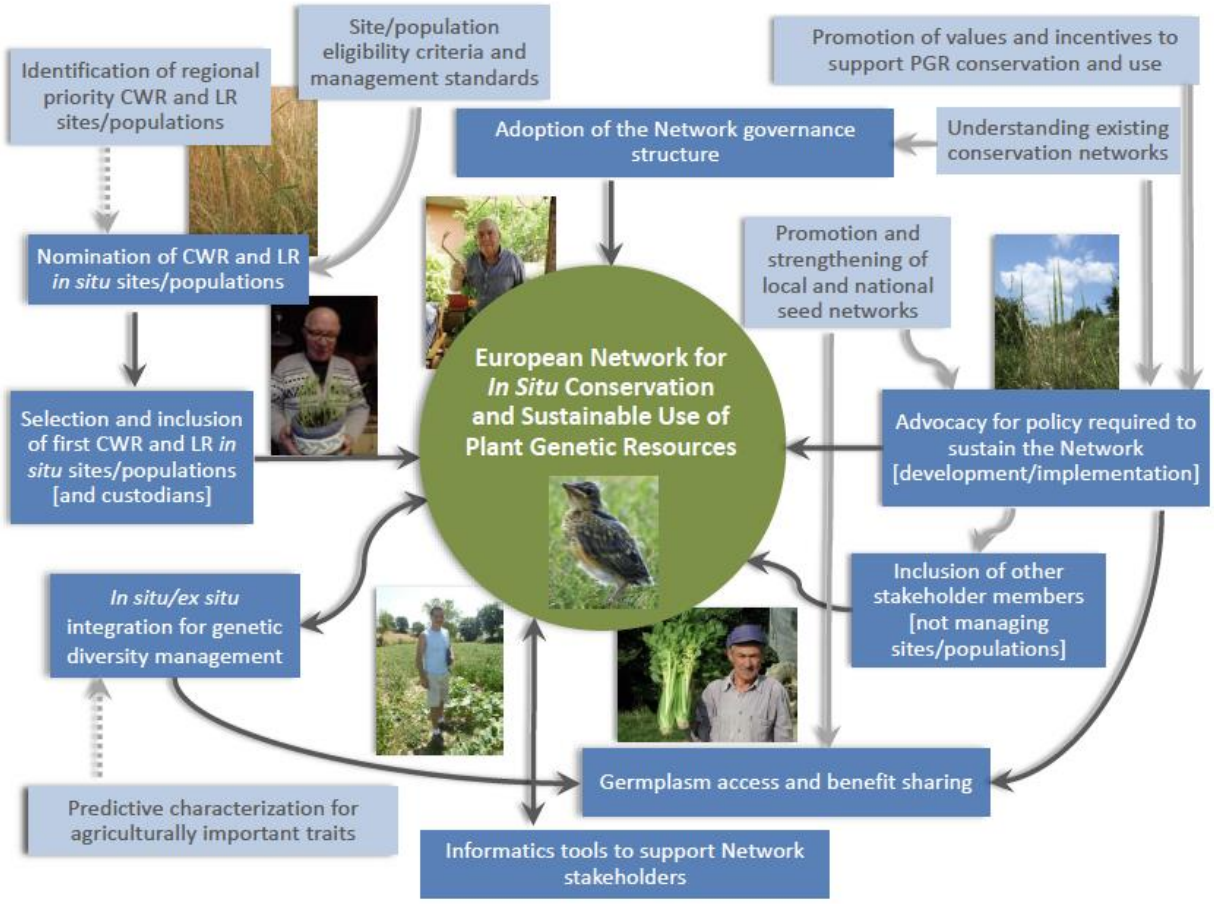


Figure 1: Elements of the Farmer's Pride project, their relationships and how they relate to the ultimate goal of establishing a 'fledgling' European network for *in situ* conservation and sustainable use of PGR. Dark grey solid arrows indicate elements that are directly linked and either dependent in one or both directions. Light grey solid arrows indicate related elements that inform other elements. Light grey dotted arrows indicate partially related elements that inform other elements.

Shelagh Kell gave an overview of the project's different stakeholder surveys and the outcomes. More than 1,000 responses from 35 countries were received to the survey launched in May 2018 which aimed to improve our understanding of the roles and interests of stakeholders in *in situ* conservation and sustainable use of PGR. All stakeholder groups were represented and with interests in all types of PGR. Positively, the majority of respondents indicated that they are interested in joining the network. In a survey to gather information on which traits are most

important to meet future agricultural and market needs, information on 1400 traits in more than 61 crops was obtained. Pest and disease resistance were identified as the traits of greatest interest. Importantly, providing the surveys in a range of different languages proved important for the success rate.

Other surveys are ongoing, including to identify specific cases of custodians conserving CWR and LR, to understand incentives for farmers to conserve LR and whether they are willing to participate in support schemes, as well as to evaluate the public's willingness to pay for agrobiodiversity-related goods and services.

In a review of existing networks for PGR conservation, it was found that they are very diverse in terms of the stakeholders involved, governance, materials conserved, conservation practices and funding. Stakeholder motivation was identified as important for network success and long-term funding fundamental for their survival. Policy related to conservation and access and benefit sharing (ABS) was also fundamental for network operation and longevity.

Shelagh Kell reported that a number of workshops have been held in Denmark and Hungary with a focus on enhancing national seed networks. Participants included stakeholders from seed-saver organizations, small plant breeding and seed companies, horticulturists, researchers, farmers, chefs, and government agencies. The workshops revealed the need to:

- Find ways of making seed networks more self-sustainable and financially independent;
- Seek permanent human resources and funding and establish a secretariat to coordinate national seed network activities;
- Improve the quality of farm-/home garden-saved seeds;
- Improve consumer awareness of the importance of agricultural plant diversity;
- Build trust between stakeholders.

Shelagh Kell went on to report progress in tasks aimed at enhancing the use of PGR conserved *in situ*: exploratory analysis of the issues hindering the use of *in situ* conserved material and possible approaches to overcome them have been proposed; initial steps have been taken to enhance access and use through bilateral meetings with nature protection organizations in The Netherlands; and a pilot website giving an overview of the available diversity in nature and in cultivation in the Netherlands and Turkey has been created. Workshops, meetings and interviews carried out in Spain, Finland and the Netherlands with the aim of improving the integration of *in situ* and *ex situ* conservation highlighted the need for education and advocacy regarding the conservation of CWR. Notably, in Spain, a pilot study has been approved involving collaboration between the Biosphere Reserve 'Sierra del Rincón' and the gene bank of the Universidad Politécnica de Madrid on the integration of *in situ–ex situ* conservation of CWR.

Other notable activities related to enhancing the use of PGR conserved *in situ* include the establishment of a network model towards a user gene bank of heritage cereals in Finland and a workshop involving the national and regional gene banks, and a farmers', consumers' and rural developers' association convened in Spain. In Finland, a marked increase in interest of growers to cultivate Finnish landrace material stored in the seed bank at NordGen has been reported and the so-called 'multiplier network' currently has 55 members (farmers and gardeners) who multiply the material for five years following instructions to produce enough seeds for cultivation. In Spain, the workshop participants were receptive to improving collaboration between on-farm and *ex situ* conservation, although acknowledging that extra human resources are needed to achieve this.

On the topic of population identification and management standards, Shelagh Kell reported on the development of *in situ* population management guidelines for CWR and LR and criteria for

the inclusion of sites and populations in the European network and the identification of specific locations throughout the region in which the optimum diversity of greatest economic importance can be conserved. She noted that the practicalities of establishing these sites as part of the European network and their integration with national networks needs to be explored. She also noted that scoping for the extension of EURISCO (eurisco.ecpgr.org) to provide access to data on PGR conserved *in situ* had been initiated and a range of other tools to support conservation and use of PGR are also under development (a LR best practice evidence-base, LR repatriation tool, and extension and web-enabling of CAPFITOGEN Tools – fao.org/plant-treaty/tools/capfitogen/en/).

Regarding dissemination and advocacy, she reported that project news is disseminated through the project website (www.farmerspride.eu) and the Twitter account (@PGRInSitu) and hashtag (#EUfarmerspride). A factsheet is currently available in six languages and a policy brief has been published calling for policymakers to work with Farmer's Pride and the wider stakeholder community to ensure adequate policies are in place for *in situ* conservation and sustainable use of PGR. She also noted project partner promotion of Farmer's Pride and the European network at various external conferences, workshops and meetings, a field open day to promote PGR use in breeding and sustainable agriculture in Italy, the publication of Issue 4 of *Landraces*, and a range of journal and newsletter articles. Finally, she highlighted planning for final conference of Farmer's Pride, in association with the European Association for Research on Plant Breeding (EUCARPIA) Genetic Resources section and ECPGR.

Shelagh Kell then reiterated the main objectives of the three stakeholder workshops organized during the project for discussion and decision-making on the development of the European network (Figure 2), and summarized the key outcomes of Workshop 1 held in Denmark in October 2018

- The wide and diverse range of PGR stakeholders presents a challenge for the successful establishment and long-term operation of the European network.
- There must be a strong motivation for stakeholders to join the network, and an effective means of communicating the purpose of the network and benefits of becoming a network partner tailored for all stakeholder groups is paramount.
- It is essential to define clear roles for all stakeholders, include a balanced representation of the different stakeholder groups, imbue a sense of ownership, and promote collaboration and cross-sectoral cooperation.
- Benefits to stakeholders from participation in the network include:
  - Improved access to and exchange of a greater breadth of PGR and associated knowledge;
  - Increased opportunities for collaboration on research, development, marketing and advocacy initiatives;
  - Greater recognition of their specific roles in PGR conservation and sustainable use and added value for their activities;
  - Collective awareness-raising of the value of conservation and sustainable use actions towards influencing a supportive policy environment.
- Transparency regarding the end-use of PGR and building trust between stakeholders is fundamental for success of the network.
- In particular, there is a need to build bridges between the so-called 'formal' and 'informal' sectors, as well as to recognize Farmers' Rights in policies underlying the operation of the network.

- The network should as far as possible build on existing infrastructures (e.g. stakeholder and site networks, relevant organizations/institutes, policy frameworks and legislation), whether at subnational, national, or international level.
- It must also cater for the inclusion of individuals, whether farmers, plant breeders, landowners, or other interested stakeholders.
- Understanding the strengths and weaknesses of existing infrastructures, as well as commonalities between them, will be fundamental for its successful establishment and long-term operation.
- Formal recognition and long-term funding of the network will be essential for its success – as a community, we need to lobby national and European policymakers, stressing the need for permanent funding for its sustainable operation.
- Agreement on good practices for PGR conservation and sustainable use and harmonization of management standards should be sought as far as possible.
- Central to the operation of the network will be the need for good information availability, management, and visibility, and any system used should cater for network members to share and exchange information.
- A draft concept for governance of the European network was prepared and discussed – this has been developed further and is presented in the White Paper on establishment of the network
- Opportunities for using existing policies and legislation to support the operation of the network, as well as a need for new policies and legislation specifically for PGR conservation and sustainable use were acknowledged.
- Of particular note is the need for legislation to protect LR/farmers' varieties and to enable new markets for farmers' products – political recognition of Farmers' Rights in line with Article 9 of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) is also essential.
- Economic incentives are one mechanism for improving the implementation of existing international policies and legislation – however, few mechanisms exist for PGR, funding is very limited, and administrative costs can be high.
- The costs and benefits of *in situ* conservation need to be understood so that this can be conveyed to policymakers – this includes the recognition of non-market, private and public values of PGR such as food and nutrition security, safeguarding the environment, income generation, improved livelihoods, and protecting agricultural landscapes and bio-cultural heritage.
- Conditions for access and use of PGR in the network need to be clear – existing laws and mechanisms are complex and off-putting for some stakeholders – a guide to sharing and using PGR could help to explain the complicated rules to encourage and support stakeholders who otherwise may feel excluded.

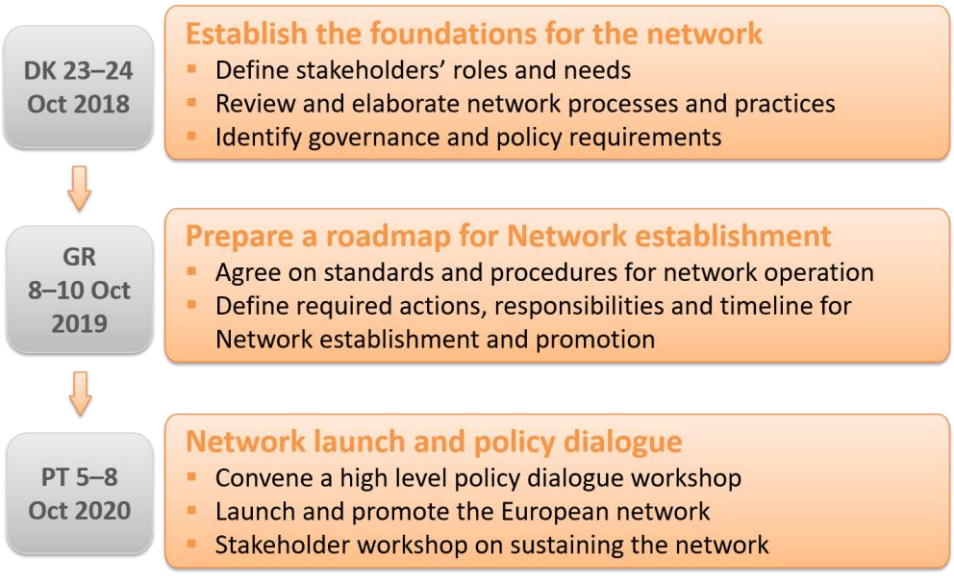


Figure 2. Objectives of the three stakeholder workshops organized during the project for discussion and decision-making on the development of the European network.

Shelagh Kell then went on to present the aim and objectives of Workshop 2 (Figure 3), reiterating that the overall aim was to prepare a roadmap (to define objectives, actions, responsibilities and timeline) for the establishment of the European network during the final year of the project and for its continuity beyond 2020. Finally, she defined who the workshop participants are (Farmer's Pride project partners, FPAs, EAB, other invited experts and members of the ECPGR Wild Species Conservation in Genetic Reserves WG) and the individual WGs, explained the structure and process of the WG discussions, and introduced the WG convenors.

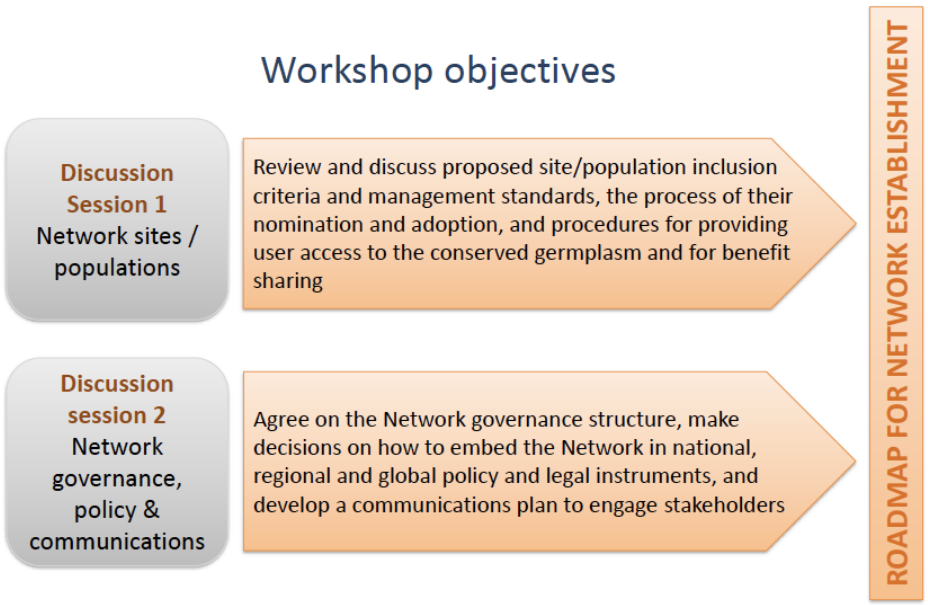


Figure 3. Workshop 2 objectives, showing the three main sessions: network sites/populations, network governance, policy and communications, and Roadmap for network establishment.

2.3 Global perspectives

Mary Jane Ramos Dela Cruz, Technical Officer, ITPGRFA, presented 'Perspectives on establishing a global *in situ*/on-farm network on conservation of PGRFA' (Annex 3), focussing on the establishment of the Globally Important Agricultural Heritage System (GIHAS) project (Figure 4).

She reported that three regional training workshops on the conservation and sustainable use of PGRFA and Farmers' Rights had been organized in Asia, Africa and Latin America and Caribeean (LAC). Highlights of the training workshops were four 'C's: Crops, Communities, Conservation and Climate change adaptation.

Community seed banks (CSBs) were noted as essential, and the role of farmers indispensable in *in situ* conservation of crop diversity. She emphasized that establishing a global (and/or regional/national/local) *in situ*/on-farm conservation network is important, noting that it:

- Serves as a platform for knowledge sharing and exchange of experiences and lessons learned on management and conservation of PGRFA especially building resilience and adaptation to climate change.
- Is a means of advocating for better decisions on PGRFA to influence policy makers, from local action to national and global conservation.
- Provides a foundation to engage, explore, or develop innovative mechanisms to promote the objectives of the network (e.g. CSBs, PPBs, Seed/Food Fairs).

She noted that the complementarity and integration of *ex situ* and in situ approaches is crucial to overcome the problems of genetic erosion, risk minimization and climate change adaptation.

Mary Jane Ramos de la Cruz also advocated better decision-making by:

- Supporting lobbying activities at national and local levels, for example by organising events to showcase progress and success of the network's activities.
- Campaigning for increased funding support and institutional support.
- Ensuring PGRFA stays on the local and national agenda, and on the global agenda.
- Promoting the ecological, social, cultural and economic importance of PGRFA.
- Promoting awareness raising and enhancing understanding of the value of PGRFA.

She also considered ways to achieve the network objectives, including mobilizing resources, funding and political support and entry points of collaboration to gain support and stimulate ideas potentially through rural tourism, eco-labelling, niche markets etc. Current achievements were noted as there being 38 active CSBs linked to national and regional banks for germplasm conservation. Seven thousand farmers are involved and capacity building is addressing the needs of farmers. Some examples were given and lessons learned from the Globally Important Agricultural Heritage Systems project.

Figure 4. Started as a project concept in 2002, Globally Important Agricultural Heritage Systems launched as a project in 2004 with 6 pilot countries (Algeria, Chile, China, Peru, Philippines, Tunisia).

Chikelu Mba, Food and Agriculture Organization of the United Nations (FAO) and member of the Farmer's Pride EAB), presented '*In situ* Conservation and On-Farm Management of PGRFA: Global Perspectives' (Annex 4).

He detailed the work of the FAO to achieve a world without hunger – currently about 820 million people (1 in every 9) go hungry. The target is to produce 60% more food (compared to 2006 figures).

Challenges are:

- An ever-increasing population.
- Climate change.
- Socioeconomic pressures.
- Inelasticity of natural resources.

Chikelu Mba gave a brief history of Global Plans of Action for PGRFA and reviewed some of the tools and relevant documents that could be used.

2.4 Proposal for the establishment of the European network

Nigel Maxted presented the Farmer's Pride proposal for establishment of the European network for *in situ* conservation and sustainable use of plant genetic resources (Annex 5).

He set out the scope as: activities that will help to build (a) network(s) of *in situ* (including on-farm and on-garden) conservation sites and stakeholders in order to develop new partnerships between the conservation, farming, gardening and breeding sectors and with the wider public. This will expand capacities to manage genetic resources in more dynamic and participatory ways and support their use in breeding, farming and the food chain. Cooperation between conservation stakeholders will enhance knowledge of available resources, support the demonstration of *in situ* genetic resources to the wider public and improve access to this genetic reservoir.

Exchanges with the breeding sector will provide openings to identify promising traits from landraces and CWRs and increase their use in breeding. Activities will also contribute to developing and showcasing strategies for *in situ* conservation and to linking *ex situ* and *in situ* conservation efforts more effectively. While targeting in particular European capacities, projects are encouraged to draw on good examples from elsewhere. The work is expected to benefit from the contribution of social sciences. Proposals should fall under the concept of the 'multi-actor approach.

He provided justifications for establishing a European network now and set out the building blocks of the European network (Figure 5):

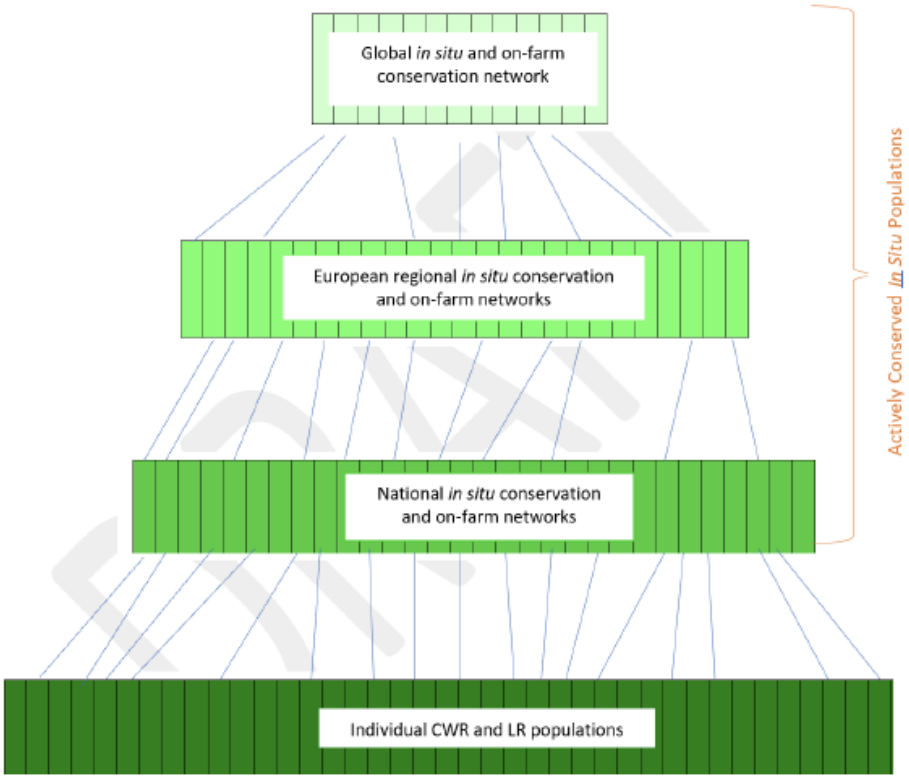


Figure 5. Building blocks of the European network: a network of networks (Maxted *et al*, 2015).

The functions of the network were described as enhanced conservation and sustainable use, facilitated coordination, enhanced partnerships, facilitated access to and exchange of conserved resource and information, and benefits to local communities.

To help the network achieve its functions, Nigel Maxted noted there needs to be:

- coordination oversight;
- increased awareness of *in situ*/on-farm PGR value;
- integration of local, national, European and global conservation actions;
- a clearinghouse mechanism;
- partnership enhancement;
- a platform for *in situ* and on-farm related research;
- a platform for dissemination of CWR/LR and *in situ*/on-farm information and knowledge;
- improved access to *in situ*/on-farm conserved resource;
- technical and policy support.

Nigel stated that there are two approaches to access to diversity via the European network (Figure 6).

1. Directly from *in situ*/on-farm site manager (PA Manager or Farmer)
2. Indirectly via *in situ* safety back-up sample held in designated *ex situ* backup gene bank.

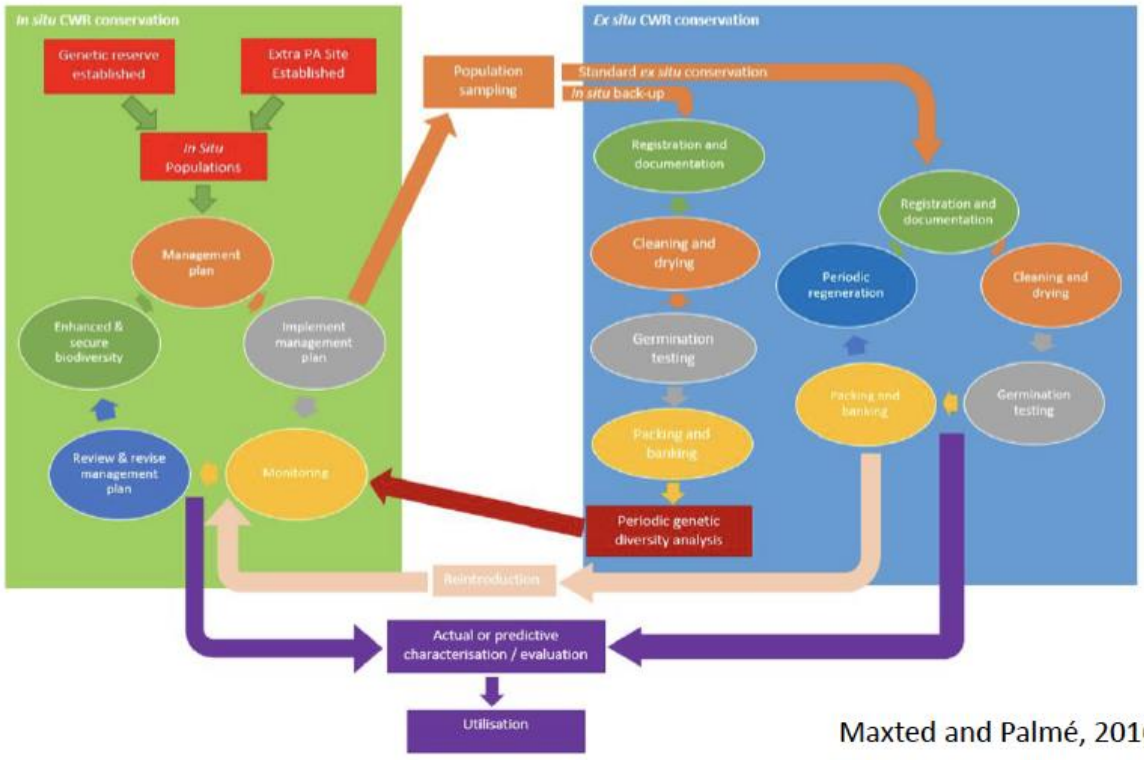


Figure 6. Building blocks of the European network: access to diversity via the European network (Maxted and Palmé, 2016).

Site popularity and eligibility was also addressed including minimum criteria for inclusion for crop wild relatives and landraces. Minimum quality standards were also considered as well as the identification and nomination process.

3.0 SESSION 1: NETWORK SITES/POPULATIONS

3.1 Overview

To maximize the PGR diversity conserved in the network, and to ensure availability and access to the germplasm, sites/populations nominated for inclusion will need to meet a set of minimum criteria and be managed according to minimum standards.

In this session, there was discussion and review of the proposed inclusion criteria and management standards, the process of nomination and adoption of sites/populations, and procedures for providing access to the conserved germplasm and guaranteeing benefit sharing from its utilisation. The aim was to come to a consensus on the standards and processes and make a clear proposal and timeline for taking them forward for implementation in the network. Participants were divided into three main WGs tackling issues related to minimum inclusion criteria, management standards and the nomination/adoption procedures for:

1. CWR
2. LR sites/populations
3. Procedures for providing access to conserved germplasm and guaranteeing benefit sharing from its utilisation.

Following introductory presentations in each WG, the groups were divided further into subgroups for the discussions. The three WGs reconvened to prepare a 15–20 minute

presentation for the plenary session. The proceedings of the WG discussions are summarised in sections 3.2, 3.3 and 3.4.

3.2 WG 1A: Standards and procedures for CWR sites/populations

Convenor(s): José Iriondo, Luisa Rubio Teso and Shelagh Kell

Chair(s): There was no designated Chairperson

The group broke into two themes: a) minimum standards for CWR population inclusion in the network and b) procedures for CWR site/population nomination and adoption in the network. Each theme subdivided into two subgroups. The four resulting subgroups were chaired by Miguel Pinheiro de Carvalho and Stefan Versweyveld for the first theme, and Vojtech Holubec and Juozas Labokas for the second theme.

Rapporteur(s): The rapporteurs of each theme were Ehsan Dulloo and Joana Magos Brehm for the first theme and Kristijan Čivić for the second theme.

Other participants: Külli Annamaa, Susanne Barth, Agnese Gailite, Vojtech Holubec, Alban Ibrailu, Alexander Just, Tatjana Klepo, Hrvoje Kutnjak, Rob Plomp, Tamara Smekalova, Katya Uzundzhaieva

Working Group Objectives:

- Discuss and agree on a) inclusion criteria and management standards for CWR sites/populations, and b) procedures for CWR site/population nomination and adoption in the network.
- Propose the steps required and timeline for taking forward these standards and processes for implementation in the network.

Summary of introductory presentation:
An introductory presentation, prepared by the convenors and presented by José Iriondo, Farmer's Pride project partner, Universidad Rey Juan Carlos, provided the context and the aims of the discussion for this working group. He introduced the specific questions to address and explained the structure and timetable of the WG discussions. He also synthesized the existing background information on minimum standards for CWR population inclusion in the network as well as on procedures for network site/population identification and nomination. Finally, he provided an update on the scientific approach that is being taken as a basis for the design of the European CWR network in the context of the Farmer's Pride project.

Summary of discussion:

Participants in this working group addressed the following questions:

1. **What specific requirements must a CWR site meet in terms of location, spatial structure, taxa, and populations?**

With regard to location, participants in this working group considered that while the process for inclusion of sites in the network needs to follow a rigorous scientific process, the criteria need to be flexible enough and include criteria that are of value for users. The network should prioritize sites with a high number of CWR, but also include sites with few CWR or even one CWR that have distinctive characters important for use. The network should not only rely on Natura 2000 sites but genetic reserves could also be established in less formal areas. Either way, the site should have a management plan where the CWR populations are taken into account. If there is one already, it should be amended to accommodate CWR populations to protect. The group also considered that boundaries should be defined based on the area of occupancy, taking into

account population diversity and the geography. Stakeholders should be consulted in defining the boundaries of the sites.

With regard to spatial structure, the inclusion of sites should consider different eco geographic areas with specific abiotic adaptation, such as drought and salinity, to be included in the network. The network should also consider the genetic structure of the populations. The question is how to select sites to be included that represent maximum genetic diversity. Participants agreed that the conservation of CWR populations should also consider the associated abiotic and biotic natural processes.

With regard to taxa and population, threatened species that are listed in red data books should be given priority, but also species that are not threatened but contain specific traits, i.e. taxa that contain distinct genetic diversity. Species that are already included in national CWR inventories and surveys and in the European CWR priority list should receive priority. Furthermore, CWR that are used for food and agriculture and species that are collected for food should be prioritized. It was agreed that CWR species that are invasive should not be included. Regarding the criteria on the threshold of 10 generations for a population to be considered, it was agreed that the threshold number should be flexible, as this would depend on the life history of each species. It was suggested that populations should not be threatened, but if they are threatened, then threat should be removed. The population size of the CWR species should be as large as possible.

Question 2: What specific requirements must a CWR site meet in terms of active management, documentation and accessibility to genetic resources?

CWR sites should have a management plan that is recognised by national and sub-national authorities, but it is not necessary that the site to be protected has legal protection. It is important to have local community involvement but not compulsory. It was agreed that there needs to be complementary *ex situ* conservation but collecting to transfer to *ex situ* collections should not threaten wild populations. It was recognised that many protected areas managers are not aware of the presence of CWR species in their protected areas. It was mentioned that land owners of sites containing CWR should also sign agreements with national agencies to ensure the protection of the CWR populations.

Documentation is important to support monitoring of target population. Monitoring should be done at regular intervals, but the frequency will depend on the life history of the species. Georeferenced data should be collected. Demographic data should be monitored, but cannot be used as an absolute requirement because it is not always possible to do it. Samples for *ex situ* conservation should be collected at regular times and the frequency will depend on the species. Herbarium specimens should be collected and sent to at least two different herbaria.

The participants agreed that accessibility to the genetic resources should be made through the *ex situ* collection under the ITPGRFA MTA arrangements. For populations that are used by local communities there should be clear rules on the use of the genetic material to avoid overexploitation.

Question 3: What minimum guidelines should be given the people in charge of managing a CWR genetic reserve for the EU network?

Guidelines should be developed to provide CWR genetic reserve managers knowledge on how to document CWR in their territory and indicate where they are located, how to set up management plans or programmes for managing CWR wild populations, how to monitor and document CWR information in a standard manner and how to spread the information to their visitors and other users of their genetic reserves.

Question 4: Which steps need to be taken to nominate and adopt a CWR genetic reserve into the European network?

Concerning the points indicated about the designation process in the background paper, a number of suggestions were given:

a) it would be useful to provide a template/checklist for the submission of proposals, keeping it simple, to facilitate the assessment by the PGR Network Committee;
b) the National PGR Committee could review the proposals to see if they meet the eligibility criteria and advise national authority on granting a national CWR genetic reserve status;
c) the sites should receive a national PA designation (or at least a national CWR genetic reserve designation) before being submitted to the European network;
d) ideally this should be done under intergovernmental agreement or it is not likely to happen - there should be an EU Directive for PGR to make this work;
e) if the PGR Network Committee does not approve a proposal submitted by a country, it will be up to the national authority to resubmit the proposal);
f) there should also be a top down mechanism considered, based on research data, by which the European PGR Network recommends sites to the member countries to nominate.

Information system monitoring and horizontal guidance are elements needed to operate a network of Genetic Reserves. The European network should have a role in providing: a) an information system to register the reserves and to provide information about them; b) a monitoring system in place; and c) guidance documents to cover all different aspects related to *in situ* conservation of CWR (genetic reserve selection, designation, management, monitoring).

Timeline and responsibilities for taking forward agreed actions for implementation in the network

	Action	**Date (end)**	**Name(s)**
1	Draft text based on PPT and other discussions point from plenary	November 2019	WG 1A
2	Disseminate document across the community (wider) to get feedback	December 2019	Task Leader 2.3
3	Prepare final document on minimal standard	February 2020	Task 2.3 team
4	Send to ECPGR ExCo for endorsement	April 2020	Task Leader 2.3
5	Presented to Intergovernmental WGPGRFA symposium	May 2020	Task Leader 2.3
6	● Include a CWR-related target in the national and EU Biodiversity Strategy for 2030 to provide the link with the AGRI policy ● Policy brief ● Approach national ministries ● Approach DG AGRI (points below included in the brief)	November 2019	Policy dialogue task force All Policy dialogue task force
7	Get the European CWR priority list in place	November 2019	UOB/URJC
8	Identify funding sources via RDP fund	From now on; need to lobby bottom up	All apply pressure

9	Information system, monitoring and horizontal guidance	---	The network

3.3 WG 1B: Standards and procedures for LR sites/populations

Convenor(s): Valeria Negri, Nigel Maxted and Lorenzo Raggi

Objectives

1. Discuss and agree on a) inclusion criteria, management standards and documentation requirements for LR sites/populations, and b) procedures for LR site/population nomination and adoption in the Network.
2. Propose the steps and timeline required for taking forward these standards and procedures for implementation in the Network.

Lorenzo Raggi, Farmer's Pride project partner from University of Perugia, gave an introductory presentation illustrating the context of the topics to be discussed in the two foreseen working subgroups:

- WG1B_1 (LR) Inclusion and management
- WG 1B_2 LR nomination and adoption

and introduced the specific objectives to be discussed and agreed. He also briefly presented the different *Background Documents* produced by University of Perugia in preparation of the meeting with the aim of better informing the participants about the discussion topics:

- 09a_Farmers_Pride_Workshop_2_WG1B_working_document.pdf
  - *Minimum quality standard of on farm management of resources included in the network*
- 09b_Farmers_Pride_Workshop_2_WG1B_working_document.pdf
  - *Minimum criteria for inclusion of a resource in the network*
- 09c_Farmers_Pride_Workshop_2_WG1B_working_document.pdf
  - *A focus on proposal and inclusion of a landrace resource/site in the network and a roadmap to Network establishment*

At this regard it should be noted that the background document entitled *Minimum quality standard of on farm management of resources included in the network* (09a) included a draft of the paper entitled *On-farm conservation management: what a collection of case studies tells us,* prepared by UNIPG to be discussed during the workshop with all the different involved stakeholders so that completing Project MS6 "Workshop organised to discuss paper with all Stakeholders".

The group then broke into two subgroups chaired by Ana Maria Barata and by Nigel Maxted, respectively.

3.3.1 Subgroup WG 1B-1: Minimum criteria for inclusion of a resource in the network and minimum quality standard of on-farm management of resources included in the network

Convenors: Valeria Negri

Chair: Ana Maria Barata

Rapporteurs: Dionysia Fasoula, Maarit Heinonen

Other participants: Béla Bartha, Claudio Buscaroli, René Hauptvogel, Judit Fehér, Albert Imre, Konstantinos Koutis and Silvia Strajeru.

Working Group objectives:

- Discuss, revise and agree minimum criteria for inclusion of a landrace in the network;
- Discuss, revise and agree minimum quality standards for on-farm management of resources;
- Discuss how to scale up the number of contributions for the deliverable D2.4 (LR population management guidelines), to reach at least 100 case studies;
- Define a timeline of actions.

Summary of introductory presentations

Leonardo Caproni, University of Perugia, introduced the two main topics:

1) Proposed definition of minimum criteria for inclusion of a resource in the network (background document 09b):
   - The resource is native at a certain location or, if introduced/reintroduced, has existed at that location for enough generations to be significantly distinct from the founder source material;
   - The resource contains distinct or complementary genetic diversity, or specific traits of interest that enhance the overall value of the network:
     – high economic value of the product;
     – adaptation to harsh and/or marginal conditions;
     – linked to local socio-cultural contexts;
   - The resource must be precisely described according to an identified minimum set of information;
   - The resource is accessible for use in accordance with the provisions set by the ITPGRFA from a known national *ex situ* facility or an approved and recognised Community Seed Bank (CSB) network collection as part of the Multilateral System (MLS).

2) Minimum quality standard of on-farm management of resources included in the network:
   - As above, if a resource meets minimum criteria for inclusion, and has been described according to agreed descriptors, it can be nominated for inclusion in the network;
   - Once in the network, farmers, gardeners, farmers' consortia, NGOs or other bodies are committed to meet minimum quality standards of on-farm management;
   - The fulfilment of minimum quality standards of on-farm management to be periodically reviewed (e.g. every five years) to ensure that agreed management criteria are being met. If necessary, recommendations for changes could be made, or a sanction could be deselection from the network.

The development of a LR management standard, proposed by UNIPG, was based on the analysis of 61 case studies provided by 11 FP partners. The following minimum quality standard of on-farm management of resources included in the network – based on evidence from the analysis of collected case studies – were presented for discussion:

- At least two farmers or two gardeners managing the resource on-farm;
- Application of "selection for trueness to morphological type" according to:
  - The reproduction system/propagation strategy for the resource e.g. autogamous, allogamous and clonal;
  - The crop type e.g. garden, open-field and tree;
- Application of isolation of mother plants when relevant (especially in seed propagated allogamous species);
- Guaranteed accessibility:
  - Formal commitment to exchange seed (or other propagation materials) with other network stakeholders in accordance with the provisions set by the ITPGRFA;
  - Periodical *ex situ* backup in a national *ex situ* facility or an approved and recognised Community Seed Bank (CSB);
- Cultivation by resource maintainers is foreseen for at least the next 15 years.

Conclusions:
The following points were agreed:

- 15 years (not generations) as a minimum requirement for a seed-propagated resource to be included in the network;
- The network must be inclusive so that other relevant materials as heterogeneous populations, obsolete varieties, etc. can be considered for inclusion;
- Identification of the maintainer must be mandatory in order to share the material within the network;
- Principal characteristics of the *in situ* resource must specify on-garden/on-farm in the title;
- Union for the Protection of New Varieties of Plants (UPOV) resources descriptions may be too strict for landraces; internationally recognized descriptors need to be used.

Agreed timeline:

	Action	**Date**	**Name(s)**
1	Review of the minimum standard of inclusion	December 15th 2019	UNIPG (University of Perugia)
2	Collect at least 40 more case studies to reach 100	November 30th 2019	Partners that did not provide any
3	Second draft of D 2.4	March 15th 2020	UNIPG
4	Submission of a paper based on the 100 collected case studies	May 15th 2020	UNIPG

3.3.2 Subgroup WG 1B-2: Review and agree on the proposal for inclusion of a landrace resource/site in the network, a roadmap to establish the network and minimum criteria for inclusion of a resource in the network and minimum quality standard of on-farm management of resources included in the network.

Convenors: Nigel Maxted and Lorenzo Raggi

Chair: Nigel Maxted

Rapporteurs: Jens Weibull, Gert Poulsen

Other participants: Aleksandar Tabaković, Helene Maierhofer, Popi Ralli, Sreten Terzić

Working Group objectives:
Review and agree on:

- The proposal and inclusion of a landrace resource/site in the network
- Roadmap to establish the network
- Review of some points from WG1B-1 relating to minimum criteria for inclusion of a resource in the network and of on-farm management.

Summary of introductory presentation
Lorenzo Raggi, University of Perugia, introduced the topic: given an estimated 9000+ landrace (LR) *in situ*, there is a need to establish a core of sites. A question was raised about how to select those sites (often without knowledge of the true diversity) and it was proposed that the Eco-geographical Land Characterisation (ELC) approach could be one way forward. Community seed banks holding/managing an array of LRs could also serve as hot spots.

Summary of discussion

1) Proposal on inclusion of LR resource/site

Several participants argued that they do not have a process in place to handle proposals. The reasons for this may be that some countries lack a national or local body, decisions are taken at various administrative levels and LRs are associated with specific areas/sites which influences the decision-making (local vs. regional).

The group suggested a process whereby a proposal initially goes via the European Cooperative Programme for Plant Genetic Resources (ECPGR) National Coordinator (NC) and is then delegated to the proper expertise (cereals, vegetables, fruits, etc.). By forcing tentative partners to go through ECPGR-NCs, the network will be formed. On the issue of selections made for LRs, or composite varieties, the group considered that the later adopted minimum criteria would be decisive.

The group concluded the following:

- Valeria to contact all ECPGR-NCs (copied to all members of the ECPGR On-farm WG); and request a response before 1 March 2020;
- A domestic process for resource/site nomination needs to be developed including recommendations on how proposals can be made (i.e. it should be obvious why certain sites will be selected);
- The aim should be to identify 5–10 LR sites per country (including/representing single growers, community seed banks, single LRs).

Since there was some time left for discussion, the subgroup agreed to also briefly discuss the topics pertinent to the other subgroup and related to *WG 1B-1: Minimum criteria for inclusion of a resource in the network and minimum quality standard of on-farm management of resources included in the network.*

2) Minimum criteria for inclusion of a LR resource in the network

The group discussed the "Minimum criteria for inclusion of a LR resource in the network" proposed by UNIPG (background document 09b) and agreed that:

- 15 years for seed-propagated crops and 30 years for trees would be appropriate;
- complementary genetic diversity is essential and historical documentation is valuable;
- the descriptors proposed by UNIPG (background document 09b) should be adopted with minor revisions e.g. to include the DOI number.

In terms of timings, the group concluded that the draft minimum criteria for inclusion of a resource should first go through minor revisions and then the management criteria should also be slightly modified. It was also noted that the timeline of actions cannot be carried out until the network establishment process has been revised. It is not possible at this stage to involve the ECPGR-NCs without a final picture of the network establishment process and network governance structure.

List of actions to be carried out after the revision of the network establishment process.
Reported dates are just indicative and subjected to modifications according to the timing of revision of the network establishment process.

	Action	**Date**	**Name(s)**
1	On-farm Chair to contact ECPGR-NCs	November 15th 2019	UNIPG
2	Chair to also distribute suggested methodology and minimum criteria	??	UOB (University of Birmingham, UNIPG
3	ECPGR-NCs to send out invitations to prospective sites	January 1st 2020	ECPGR-NCs
4	ECPGR-NCs to nominate of 5-10 sites	March 1st 2020	ECPGR-NCs

3.4 WG 1C: Germplasm access and benefit sharing procedures

Convenor: Theo van Hintum

Chairs: Lothar Frese and Theo van Hintum

Rapporteurs: Theo van Hintum and Lothar Frese

Other participants:
Regine Andersen, Külli Annamaa, Anders Borgen, Adam Drucker, Valentina Garoia, Vojtech Holubec, Mario Marino, Tamara Smekalova, Paul Townson, Merja Veteläinen

Working Group objectives:

- Define the elements required for improving access and increasing the use of *in situ* diversity;
- Describe these elements in some detail and how they could be created or improved; Describe the roles of the various actors involved in improving access and increasing the use of *in situ* diversity.

Summary of introductory presentation

- The world needs access to PGR (climate change, growing world population, changing agriculture, consumers demands, etc.);
- Politics is trying to help but achieving the opposite (CBD & Nagoya protocol, phytosanitary rules & bureaucracy);
- The *ex situ* approach is effective (sample the diversity, conserve it securely (incl. safety back-up), document it (incl. phenotypic and molecular data), make the data and material accessible, meet requirements for distribution);
- The *in situ* situation is less effective (community is not very coherent, missing elements for access in terms of lack of (accessible) information about the conserved PGR, lack of knowledge about the use-value of the PGR, lack of infrastructure for access (who, how), and lack of clarity about conditions for use (MTA)).

Summary of discussion

- Both *in situ* and *ex situ* conservation are needed to combat societal challenges;
- On-farm (LR) and in-nature (CWR) are different topics – the boundaries between them are not always clear and there is a danger of ending up in semantic discussions;
- On-farm (at least part of it) is dynamic in its nature – this adds to the value but makes the concept of conservation and even documentation difficult;
- The simplest solution to access *in situ* diversity is to transfer it to a gene bank – this is limited by capacity, but *ex situ* facilities can and should play a supporting role;
- Access to information is essential: seed-saver organizations can/should play a role in identifying on-farm material; a national 'Centre for Genetic Resources' could play a role in making information accessible; a European website could be the first entry point;
- The value of *in situ* PGR must be clear – however, determining the value of CWR is problematic since publicly funded pre-breeding has disappeared in many countries – approaches of collaboration need to be sought. More characterization and testing of LR is also needed but difficult to realise. We need to look for mechanisms that stimulate the users to share their findings and observations (also a problem *ex situ*) – existing information should be made better available;
- Germplasm maintainers must understand the importance of their material 'for the world' and trust needs to be built with potential users. In this regard:
    - If the use of the PGR is restricted to use 'for food and agriculture' that could be stressed and supports the use of SMTAs;
    - Misappropriations of germplasm are exaggerated – a registry of incidents in Europe has been created (by the FNI) to ensure lessons are learnt, hardly any cases were found;
    - Case studies of the use of PGR from one part of the world to solve problems in another part of the world would be beneficial;
- Conditions for access and use have to be clear. In general, laws and MTAs are too complicated (farmers do not like that) – think of the restrictions in quantities and conservation varieties – a 'Farmer's Guide to Sharing and Using' could help to explain the complicated rules to farmers and farmers' organizations. Seed laws also differ by country (often interpretation of European laws) – having an overview of these laws would help;
- At a policy level, it is important not to increase complexity, but to aim to reduce it;
- The Farmer's Pride initiative led by the WG convenor to create a national entry point for access to PGR which gives information about existing sources of PGR and their availability *in situ* was well received. The system will be promoted when it has been

populated with information from countries other than the Netherlands and Turkey, the two pilot countries.

3.5 Summary of plenary discussion

Following presentations of the WG conclusions, a number of points were raised, including:

- The requirement for network members to provide material, in particular whether everything should be available under standard material transfer agreements (SMTA) as far as possible or whether there should be options for members to join on other terms with different categories of membership;
- Whether there should there be a requirement for sites/populations to meet minimum standards on **all** criteria or some kind of evaluation on the basis of scoring on a number of criteria. It was commented that they seldom meet all criteria in German projects; in order to expand the network quickly, less stringent criteria could be adopted. It could be that site managers increase quality over time. There was general agreement to this;
- The need to be flexible: there might be a site with important attributes that do not meet minimum standards; some countries have few possible sites. There may be a need to prioritise categories within each criterion. Natura 2000 sites had to apply using certain standards; the network was initially funded by GEF, based on country government endorsement. Then it was a case of 'learning by doing' (technical, operational framework).
- It was suggested that we use the amended criteria but remain flexible, particularly given the time constraints of the Farmer's Pride project. If we find it is excluding the most important sites, we have to revise the criteria.
- The importance of phytosanitary issues, providing more justification for a GR centre;
- Whether national priority CWR lists are still required;
- There is a need to expand the analysis on the importance of PGR conservation and sustainable use (eg, based on the GPA) and to reconsider the language, which is very much angled towards CWR. Sustainable use should be integrated into all aspects related to LR and terminology around on-farm management, instead of conservation and other aspects (eg, governing body vs. steering committee).

4.0 SESSION 2: NETWORK GOVERNANCE, POLICY AND COMMUNICATIONS

4.1 Overview

The network will require the establishment of a governing body to oversee its operation and appropriate policies to sustain it, as well as strong communications to engage the full suite of PGR conservation and use stakeholders. The aims of session 2 were to agree on the governance structure required to establish and maintain the network, make decisions on how to embed the network in national, regional and global policy and legal instruments, and develop a communications plan to engage stakeholders.

Following two presentations in plenary, participants divided into three main WGs tackling issues related to 1) governance, 2) policy and advocacy, and 3) communications. Following introductory presentations in each WG, each group divided further into subgroups for the discussions. The three WGs reconvened to prepare a 15–20 minute presentation for the plenary session.

4.2 EU Policy perspectives

4.2.1 EU activities in support of genetic resources and agrobiodiversity

Annette Schneegans, DG Agriculture and Rural Development, European Commission made a presentation via Webex on genetic resources cutting across several policies and competences at EU level (Annex 6) including:

- Convention on Biological Diversity, in particular the Nagoya Protocol on Access and Benefit Sharing, and other biodiversity policies/activities: DG Environment
- ITPGRFA and seed legislation: DG SANTE
- Patents (incl. in breeding): DG GROW (DG SANTE)
- Promotion and use of GenRes in agriculture (and forestry): DG AGRI
- Research and innovation for GenRes in agriculture and forestry: DG AGRI (DG RTD)

Genetic research is supported through agricultural research under Horizon 2020 and there are complementary objectives of the Common Agricultural Policy (Figure 7).

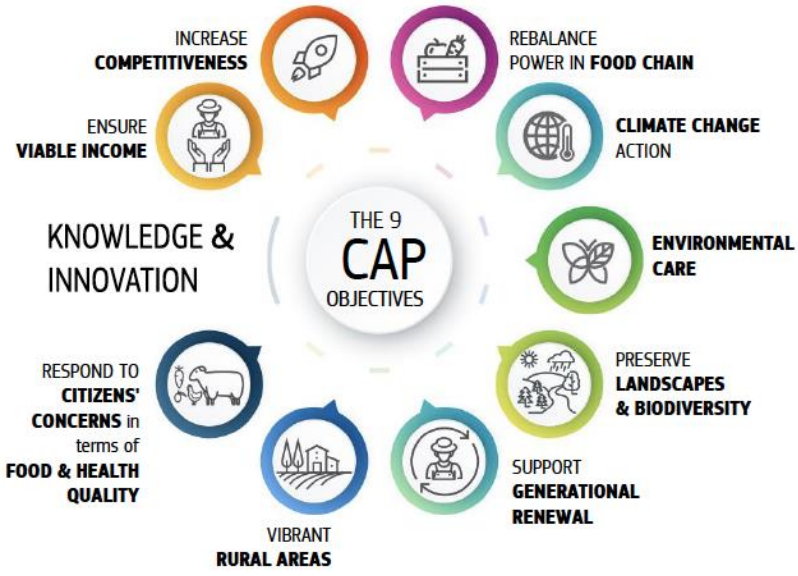


Figure 7. Objectives of the Common Agricultural Policy include preserving landscapes and biodiversity as well as knowledge and innovation.

New priorities for the European Commission were detailed as:

- A European Green Deal, A Biodiversity Strategy for 2030, “Farm to Fork Strategy” on sustainable food;
- An economy that works for people;
- A Europe fit for the digital age;
- Protecting our European way of life;
- A stronger Europe in the world;
- A new push for European democracy.

4.2.2 Natura 2000

Alexander Just gave a presentation on establishing a network in the context of the EU Nature Directives, the Birds Directive (1979) and the Habitats Directive (1992). Both directives have a site protection pillar and a species protection pillar. They are central EU policies for biodiversity protection, focussing on the conservation of:

- All wild bird species naturally occurring in the EU (Birds Directive)
- ~1300 species and 231 habitat types of Community interest (Habitats Directive).

The Habitats Directive’s aim of **favourable conservation status** is defined as:

- natural range and distribution within range either stable or increasing;
- structure and functions for its long-term maintenance;
- habitats: conservation status of the typical species is favourable;
- species: sufficiently large habitat to maintain populations in long term.

The Natura 2000 network of sites is based on the two directives and has a **species protection pillar** focussing on:

- 193 bird (sub)species in Annex I + regularly occurring migratory birds (Birds Directive)
- 869 taxa (at species or genus level), incl. ≥ 297 animal species, and 231 habitat types of Community interest (Habitats Directive).

Its **site protection pillar** consists of a coherent network of sites, selected on scientific criteria:

- Representativeness of sites in terms of distribution and area for each of the species and habitats of Community Interest;
- Species and habitats across their entire natural range in the EU, irrespective of political boundaries.

Management of the sites is carried out to maintain or improve conservation status. There is strong legal protection at site level, although new activities or developments are not automatically excluded. The current status of Natura 2000 is that it covers 18% of EU land and ca. 6% of marine area of the EU Member States, in 27,863 sites (Birds and Habitats Directive). The terrestrial part of the network is now almost complete. There is an increasing focus over time on site management and financing of Natura 2000, and on enhanced collaboration with landowners and users.

A very important share of the Natura 2000 habitat types and species are strongly dependent on the maintenance or imitation of traditional agricultural practises. Some of these species and habitats are extremely sensitive to land use changes, hydrological changes and/or fertilisation. The main threats are intensification and land abandonment. There is a need for targeted and continuous agricultural management; ultimately we depend on viable agricultural systems.

Important information sources relating to the Natura 2000 network:

- **Farming for Natura 2000:** http://ec.europa.eu/environment/nature/natura2000/management/docs/FARMING%20F OR%20NATURA%202000-final%20guidance.pdf
- **Habitat types dependent on agricultural practises:** http://ec.europa.eu/environment/nature/natura2000/management/docs/FARMING%20F OR%20NATURA%202000-ANNEXES%20A-D-final.pdf
- **EU-wide Natura 2000 database:** https://www.eea.europa.eu/data-and-maps/data/natura-8
- **Natura 2000 Viewer:** http://natura2000.eea.europa.eu/
- **EU-wide Article 17 database:** https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-1
- **Article 17 Reporting Viewer:** https://bd.eionet.europa.eu/article17/reports2012/

4.3 WG 2A: Network governance

Convenors: Béla Bartha, Kristijan Čivić and Nigel Maxted

Chairs: Béla Bartha, Kristijan Čivić and Nigel Maxted

Rapporteurs: José Iriondo, Joana Magos Brehm

Other participants:

Three groups:

1: Nigel Maxted	**2: Béla Bartha**	**3: Kristijan Čivić**
Alexander Just	Ana Maria Barata	Susanne Barth
Tatjana Klepo	Anna Palmé	Fasoula Dionysia
Juozas Labokas	Miguel Pinheiro de Carvalho	Lothar Frese
Joana Magos Brehm	Rob Plomp	Vojtech Holubec
Nigel Maxted	Popi Ralli	Alban Ibraliu
Chike Mba	Katya Uzundzhalieva	Albert Imre
Valeria Negri	Stefan Versweyveld	José Iriondo

Introductory presentation by Nigel Maxted

The establishment of an appropriate governance structure will be fundamental to the sustainability of the network established through the Farmer's Pride project. Governance is defined as the way that an organization or country is managed at the highest level, and the systems that action the management. In this network context, governance will require the establishment of a governing body to oversee the network's operation and ensure enforcement of network management actions associated with good practice of the network. The governing body will, for example, review new national site/population nominations, evaluate the effectiveness of existing ones, liaise with national PGR coordinators and complementary conservation actors, ensure the conserved resource is available to the germplasm user community and provide support at policy level.

Critically, the governing body needs to operate under the umbrella of a European organization(s) or agency(s) that integrates systematic national and European level PGR conservation, as this would be likely to have good commitment and support throughout the region, and funding opportunities to resource site management at both geographic levels. Furthermore, such an organization(s) or agency(s) could provide links to the global, European and national user communities, and to European and global policy instruments (e.g. EU Directives, CBD, ITPGRFA). Possible organizations or agencies that could be involved in the governing body are:

- EC Directorate Generals for Environment and/or Agriculture and Rural Development;
- Eurosite and the Europarc Federation;
- ECPGR Executive Committee (ExCo), On-farm Conservation and Management, Wild Species Conservation in Genetic Reserves and crop WGs (including national gene bank representatives);
- Agro- and in-garden conservation NGOs;
- Euroseeds.

The roles of the governing body would include:

- Assessment of whether nationally nominated sites meet minimum criteria for inclusion in the network;
- Periodic review of nationally managed sites to ensure they continue to meet minimum criteria for inclusion in the network, and continue to fulfil network reporting obligations;
- Promoting dynamic *in situ* conservation regionally and nationally of important CWR/LR diversity;
- Promoting access to *in situ* conserved CWR/LR diversity linked to sustainable utilisation and benefit sharing;
- Providing advice, expertise and access for site managers to appropriate *in situ* CWR and LR conservation, access and benefit sharing and sustainable utilisation knowledge and expert systems;
- Assistance with provision of grants from funds, in-kind assistance from various regional and national institutions, national governments and co-financing from institutions who have a stake in the network;
- Provision of management tools, protocols and training for network site management;
- The development of effective strategies for gathering, documenting and disseminating baseline information on globally important CWR and LR populations;
- Recommending research projects to countries and making proposals on the organization of regional or international cooperation;
- Coordinating international cooperation of Member States participating in the network;
- Coordinating international scientific programmes in Europe and relations with such programmes outside of Europe related to PGR research;
- Consulting with international NGOs on scientific or technical questions;
- Increasing awareness of the importance to agriculture and the environment of CWR and LR diversity among governments, institutions, decision-makers and the general public.

The management of network sites/populations will be under the sole control of national authorities, possibly within the context of an existing national PGR network. The governing body will collaborate and work with national governments as lead national focal institutions and with the proactive participation of farmer/producer cooperatives, farming communities, youth and women's groups, research centres and academics, and other relevant local or national organizations.

The governing body would be required to meet at least annually to review network activities, membership and new site/population nominations. Sites/populations included within the network would need to be reviewed periodically (e.g. every five years) to ensure they still meet agreed inclusion and management criteria. If necessary, recommendations for changes would be made, and the sanction of de-selection from the network would be available.

Formally establishing the network governing body will require a legal document to be drawn up to include the statutes, define the legal status, mission, vision, functions, membership etc. of the network. This will likely take some time, therefore, within the timescale of the Farmer's Pride project, immediate nominations would be reviewed by the proposed members of the network governing body who are collaborators in Farmer's Pride (e.g. Eurosite, ECPGR ExCo, On-farm Conservation and Management, Wild Species Conservation in Genetic Reserves and crop WGs, Arche Noah, Pro Specie Rara and Euroseeds). This is seen as a pragmatic option to ensure the network is established within the Farmer's Pride project lifetime, but the full network governing body will be established as soon as possible. The formal establishment of the governing body will commence as soon as this proposal is endorsed during Farmer's Pride Workshop 2 in October 2019.

The basic costs associated with individual site/population management would be met nationally. It is envisaged that network designated sites would be within existing protected areas (PA) and, outside of PA, largely on-farm – funding to cover population maintenance and meet network inclusion criteria for on-farm sites would be met from environmental stewardship or agricultural support regulations.

It is also important to note that, thus far, experience has shown the additional costs associated with active CWR conservation have proved deliverable within existing PA resource allocations—the real additional costs are out-weighed by the additional ecosystem services value of conserve PGR resource and the positive publicity associated with the conservation action. In the longer term, it would be desirable to ensure additional resources were available for network sites, particularly for LR on-farm sites where more active intervention was required to sustain the target population.

Working Group objectives:

- To arrive at a consensus concerning the European organization(s) or agency(s) that can provide the governing body for the network;
- To review and agree the network management actions associated with good practice of the network, in order to make a clear proposal for taking them forward for implementation in the network.

Specific objectives

- Discuss and agree which European organization(s) or agency(s) could provide the governing body's role of over-arching management of the network;
- Discuss and agree which other collaborating organizations might form part of the network management committee;
- Discuss and agree the role of the governing body in over-arching management of the network;
- Discuss and agree the initial inclusion procedures for inclusion in the network over the first 12 months prior to the launch of the network;
- Propose the steps required and timeline for taking forward these actions towards implementation of the network.

Summary of discussion:

Group 1 (led by Nigel Maxted):

1. Suggestion that DG AGRI and DG ENV (with involvement of DG SANTE) could provide the over-arching management to the network

    a. ECPGR Secretariat jointly with chairs of WG *In situ* (Nigel Maxted) and On-farm (Valeria Negri) write to ECPGR National Coordinators or Ministry (find out from WG member in country who is most appropriate) to:
        i. Announce the establishment of the European network and seek their support for its establishment via a Letter of Support to be sent to the DG AGRI / ENV;
        ii. To nominate 5−10 sites (*in situ* and on-farm) to join the network;
        iii. To join a meeting seeking endorsement for the establishment of the network;
        iv. The letter to ECPGR NC or Ministry will include:
            - Updated white paper concerning the establishment of the network
            - Network inclusion criteria
            - Some suggestions for how they go about choosing their 5−10 sites, including the establishment of national networks.

        We copy these invitation letters to Natura 2000 and European Nature Conservation Agency Heads network (ENCA), national focal points and Head of DG AGRI and DG ENV;

    b. The endorsement meeting could potentially be funded by the German government (and be held in Germany or Brussels). Frank Begemann could be contacted by ECPGR to seek funding for the meeting. Possible alternative funding sources are Norway and France;

    c. The meeting would include presentations on justification of the network, how it would function, regional analyses (general CWR hotspots in Europe, CWR presence in each habitat/Natura 2000 site, CWR presence at country level, detailed analysis of LR in some countries, e.g. Italy and Portugal) sent previously to DG AGRI/ENV and finally DG AGRI / ENV would be invited to provide the needed governance role;

    d. Depending on funding availability, the meeting would involve representatives of ECPGR NC, Natura 2000/ENCA, national focal points, PGR NGOs, and DG AGRI/ENV.

2. Which collaborating organizations should be included in the network management committee?
    a. As an initial proposal the network should have three committees:
        i. **Network governance committee** with representative of DGs, ECPGR WG on-farm and *in situ*, NGOs and breeders with responsibility roles: overall governance of the network;
        ii. **Network Management Committee** with representative of ECPGR *In situ* and on-farm WG members and others on a country rotating basis with responsible for routine network management issues, e.g. assess new nominations, doing reviews, making sure they meet the maintenance criteria;
        iii. **General Assembly** with representatives of those managing sites/populations within the network, responsible for revision of mechanisms for running the network.

3. What process should be used for initial inclusion of site/populations in the network in the first 12 months of the network?
    a. Ask national partners to establish an *in situ*/on-farm subcommittee to start to plan national *in situ*/on-farm activities;
    b. Ask national partners to nominate 5−10 sites to be included in the network;

c. Develop a longer term information system for *in situ*/on-farm data, but germplasm access within the network should be via EURISCO.

4. What roles should the governing body play in network management, see proposed list above?
   The three committees proposed above will, between them:
   i. develop standards and practices guidelines for different processes (seed collection, access, etc.);
   ii. develop management guidance to include recommendations for the GR to ensure that the seeds are stored in the relevant Gene Bank for easier access;
   iii. manage a central database (or advise) on *in situ* network of LR and CWR sites;
   iv. analogic to AEGIS – coordination between Gene Banks and *in situ* sites – ensuring that both cover all species;
   v. EURISCO to be adjusted to include *in situ*/on-farm germplasm access data;
   vi. support countries in developing national PGR strategy;
   vii. support countries in developing national *in situ*/on-farm committees and they become responsible for the national process of network nominations.

   All countries should make the case for PGR inclusion in 2030 Biodiversity Strategy at national and European levels.

Group 2 (led by Béla Bartha)

1. Is there a European organization(s) or agency(s) that could provide the overarching management to the network? If so, which?
   - DG AGRI is the most obvious organization but we need to sell the idea. The broader we sell it (food safety, biodiversity, etc.), the easier the authorities will identify their role;
   - Difficult to see the member states advocating the idea so we need better advocacy;
   - DG AGRI and DG ENV to co-own the idea. However, it is always a Commission decision not just DG AGRI and DC ENV.

2. How do we encourage a European organization(s) or agency(s) to provide the overarching management of the network?
   - Two possible approaches: the German government would introduce this into the European Parliament or circulate a document among the European countries. First option is not a good idea because it will be linked to a political party. If we contact each NC and get their support, then the next step could be a congress hosted by the Ministry;
   - An alternative organization could be the European Environment Agency; they are not a policy driver, but an implementing agency, so would not be the best option;
   - We could look into contacting champion governments (Norway, Switzerland, Germany) and lobby that way;
   - The marriage with DG AGRI and DG ENV is our first option. If this does not work then we have to find an alternative of gathered stakeholders (ministries, seed companies, universities, etc);
   - It was agreed that it is not a viable option to aim to extend Natura 2000 to include priority CWR.

3. Which collaborating organizations should be included in the network management committee?
   - The governance committee should include representatives of DGs, ECP On-farm and *in situ* WGs, NGOs and breeders;

- A lower level committee should assess new nominations, complete reviews and ensure sites meet the maintenance criteria.
- Would it be possible to rotate committee members to include people from different countries?

4. What process should be used for initial inclusion of sites/populations in the network in the first 12 months of the network?
   - Ask the national partners to nominate 5 □10 sites to be included in the network.

5. What roles should the governing body play in the network management (see proposed list above)?
   - The lower-level committee assesses whether sites meet the criteria.
   - They should have a contract with the land-owner.

Group 3 (led by Kristijan Čivić):

1. Which European organization(s) or agency(s) could provide the overarching management of the network?
   - ECPGR is the key player;
   - ENCA network provides link into Nature Sector;
   - EC DG ENV/AGRI Expert group on *In situ* PGR.

2. How do we encourage a European organization(s) or agency(s) to provide the overarching management of the network?
   - There should be a bottom-up approach (from National or sub-national level);
   - National Coordinator in each country of SC of ECPGR – this approach could deliver the plan in that country (next steps);
   - Meet with EC and present formally the initiative in Brussels (based on *in situ*) try to get it on board already for the 2030 Biodiversity Strategy;
   - Present the case also to ECPGR and ENCA at the same time (now!)

3. Which collaborating organizations should be included in the network management committee?
   - IUCN SSC to help raise funds for the functioning.
   - EURISCO to provide the database framework.
   - LR networks and federations coordinating smaller organizations in different countries.

4. What process should be used for initial inclusion of sites/populations in the network in the first 12 months of the network?
   - Establish national list (formal or informal) of CWR – in the end it should be officially endorsed by the country (included in guidelines below);
   - Approach national coordinators and provide them with criteria/guidelines and ask for Candidate Sites (based on national priorities: European priority, national level of threat).

5. What roles should the governing body play in network management, see proposed list above?
   - There should be a Technical Secretariat next to the Management Committee;
   - Approach similar to AEGIS project but for *in situ* with involvement of ENCA;
   - Develop standards and practices guidelines for different processes (e.g. seed collection, access);

- Management guidance to include recommendations for the GR to ensure that the seeds are stored in the relevant Gene Bank for easier access;
- Manage a central database (or advise) on *in situ* network of LR and CWR sites;
- Analogic to AEGIS – coordination between gene banks and *in situ* sites – ensuring that both cover all species;
- EURISCO to be adjusted to the needs of the database for this network.
- Support the countries in developing national PGR strategy.

Timeline of agreed actions:

	Action	**Date**	**Name(s)**
1	Explanation of network establishment plan to ECPGR Secretariat	M1	NM
2	ECPGR write to National PGR Coordinators or Ministry seeking LoS	M2	LM
3	ECPGR seek funding for endorsement meeting	M2	LM / NM
4	Initial explanation of network establishment plan to DG Agri/Enviro	M3	KC/NM/LM
5	National partners to establish an *in situ*/on-farm subcommittee and nominate 5-10 sites	M6	Countries
6	Endorsement meeting	M9	All
7	Launch of network	M12	All

WG network governance conclusion

Although there was general agreement over the necessity of having a self-sustaining governance structure, ultimately the WG could not agree final conclusions to recommend to the plenary sessions.

The proposal was made to establish a task force to agree a Governance Concept to be recommended to the FP Consortium. The task force would be chaired by Ehsan Dulloo (Bioversity) with support provided by Karen Inwood (Plantlife International) and the members would be Béla Bartha (ProSpecieRara), Lorenzo Raggi (UNIPG) and Nigel Maxted (UoB).

4.4 WG 2B: Network Policy and Advocacy

Convenor(s): Ehsan Dulloo and Adam Drucker

Chair(s): Ehsan Dulloo and Adam Drucker

Rapporteur(s): Jaime Prohens and Adam Drucker

Other participants: attendees not listed.

Working Group objectives:

- Identify concrete policy actions that Farmer's Pride constituencies can take to help sustain the European network; and
- Ensure that there is a direct long-term European commitment to provide the necessary governance for it to be sustainable.

The WG was divided into two sub-WGs to discuss policy actions regarding crop wild relatives and landraces separately: the CWR sub-WG was facilitated by Ehsan Dulloo and Jaine Prohens was the rapporteur, while Adam Drucker led the discussion in the landrace sub-WG. Each sub-WGs answered 7 questions which were designed to facilitate discussion. The notes of their discussions were then combined as summarised below.

Summary of discussion

Question 1: What concrete policy measures are required for sustaining the 'European network for *In situ* Conservation and Sustainable Use of Plant Genetic Resources' established by the project?

- The WG discussed how the network will function in terms its location, participation of stakeholders, awareness of member states in Europe, the linkages between national actors and EU to support the network;
- There is a need to better explain what the benefits and incentives (monetary or non-monetary) are for stakeholders joining the network;
- A specific EU Directive for PGR would be needed including funding measures for sustaining network(s). However, establishing such a directive may be difficult to achieve. It may be best to consider joining forces with other initiatives (e.g GenRes, Dynaversity, ECPGR etc.) to make the submission to EU;
- There is a lack of awareness of national focal points about the presence of CWR species in Natura 2000 sites. Specific actions should be carried out to conserve CWRs, create awareness and provide scientific data on the percentage of CWR present in Natura 2000 sites;
- The linkage between stakeholders from agriculture and environment sectors has not been successful. It is necessary to influence the national agendas for conservation of the wild diversity to include CWR conservation.

Question 2: What are the key priority policies pertaining to food, agriculture, biodiversity and the environment? What are critical legislative gaps and opportunities that exist at the European level for plant genetic resource conservation and use?

- The WG agreed that there is a need to undertake an in-depth analysis of the existing relevant directives and regulations;
- There are a lot of relevant legislation and issues missing from the working document, for example legislation on varietal variety release and seed marketing, cultural aspects,

farmer's rights including in the context of seed company potential involvement in multiplication, as well as potential property right issues;
- Current regulations can be limiting because they impede development of conservation varieties. There is also a need to work within new regulations (e.g. related to organic production).

Question 3: What policy actions are needed to bridge the existing policy gaps and harmonize conflicting policies?

- There is a need to reduce conflicts between rural development and conservation policies e.g. farmers can receive a subsidy from rural development agencies to maintain grasslands but not for maintaining CWRs;
- There is also a need to reduce conflicts between ministries (agriculture and others conserving natural resources);
- It was acknowledged that the exchange of seeds (CWR) are subject to different approaches between countries. A comprehensive list of policy measures at EU and national level is needed, so that opportunities can be identified for bringing together different European legislation (e.g. related to access, marketing issues as well as UPOV);
- Challenges/limitations include:
  - inadequate support under existing RDP and a lack of prioritisation;
  - current legislation is creating limitations rather than promoting conservation and use;
  - only a few varieties are supported in the existing lists: cost of registration can be high and there is a lack of monitoring and flexibility;
- The WG recommended that a gap analysis be carried out in a selected number of countries.

Question 4: What regulatory framework is needed to facilitate access, use and equitable benefit sharing of *in situ* conserved agricultural plant diversity?

- The WG agreed that it was not the task of the network to change any regulatory framework. This is already covered by ITPGRFA and CBD: Article 9 (Section 3) of ITPGRA states that rights to save, use and exchange lie with farmers. Farmers joining the network could be viewed as part of facilitating access;
- It was also mentioned that farmers' rights are generally not implemented in practice. The support for *in situ* maintenance of diversity for the public good could be seen as contributing to equitable benefit sharing.

Question 5: What incentive mechanisms and schemes can be proposed aimed at sustaining *in situ*/on-farm conservation of CWR and LR diversity?

- The WG discussed who can provide incentives for the conservation of CWR and landrace diversity. Several organizations were mentioned.
  - Seed companies or associations such as Euroseeds are doing a lot to promote the importance of PGR, but may create conflicts with other stakeholders (e.g. some NGOs and some associations);
  - The World Bank was mentioned and is interested in supporting diversity conservation and use;
  - The Coalition for Sustainable Development and Bioversity International are also working with companies and countries to inject more diversity into crops through the development of an ABD Index;

- The WG also discussed any disincentives for conserving CWRs. In some countries there are incentives for maintaining landraces (e.g. Serbia), but not for CWRs. It was suggested that providing recognition of the protected areas that maintain CWRs might be a good inception;
- It was agreed that the current scale of existing support is inadequate. National levels of support differ for different materials. For example, cereals support in Italy is adequate, but less so for other materials. Support should be based on analysis of the needs (which may be non-monetary as well as monetary – e.g. access to seed) to support conservation and use. National consultations should be provided in order to identify concerns and opportunities. There is a need to create ownership by the stakeholder and not be top-down;
- The WG also suggested considering developing a diversity index and map leading to the ability to provide differentiated support for the cultivation of higher levels of diversity. Other dimensions (e.g. culture, nutrition, organic production, degree of youth engagement) should also be considered when determining support levels.

Question 6: Who are the key policy- and decision-makers? How can they be contacted and how can we engage them?

- Key policy- and decision-makers should include national focal points of ITPGRFA and the Commission on Genetic Resources for Food and Agriculture, who could be those who approve the nomination of sites for inclusion in the network at national level;
- It was suggested there needs to be more engagement with stakeholders to discuss their needs and the network. Multi-stakeholder workshops should be run in a few countries to motivate stakeholders to join the network. This should be undertaken in the remaining time of the project.
- It was noted that community seed banks and seed savers are missing from the current discussion document. There is a need to raise awareness amongst those who are already in suitable positions in the country.
- The WG agreed that the network can start small, with other countries joining later thus leading to the formation of the network over time.

Question 7: **What is the basis of a convincing argument that clearly demonstrates the advantage to the EU of a more active role in *in situ*/on-farm conservation of CWR and LR diversity, to show that economic opportunities are being lost and it is in the EU interest to act now to halt erosion and extinction of these European natural resources?**

- The WG discussed who we should target to join the network. It was agreed that there are many NGOs and organizations that need to be convinced to be part of the network. It was agreed that targeting EU policy makers would be the best strategy. It was also suggested it could be very effective if a citizen's initiative could be established to influence policy makers;
- It is not sufficient to argue for conservation for the sake of conservation, but also regarding the importance of use and the need for value addition for use and for the network. Clarity regarding the added value of this network should be provided. The concept of Total Economic Value is important in this context (provisioning, ecosystem service values, including landscape resilience and traditional knowledge/cultural aspects, future option values) and the existence of important public goods;
- Climate change, nutrition and organoleptic considerations could form the main arguments for advocating a higher level of EU interest in conservation and use;

- There is a need to ensure that there is a clear understanding of why *in situ* conservation is needed beyond the *ex situ* conservation that already exists;
- Engagement with consumers (and younger farmers) so that they will understand the benefits of conservation and the costs of loss. Methods to raise awareness among these stakeholders are needed in order to enhance value;
- On-farm conservation needs to be better supported by policy – current support levels are only adequate for some materials.

Timeline of agreed actions:

	Action	**Date**	**Name(s)**
1	Organize meeting with DG agriculture and Environment in Brussels	Dec 2019	Taskforce on Policy
2	Stakeholder consultation in a number of pilot countries	March 2020	
3	- Preparation of a second policy brief focused on strategic action plan for in situ/on farm conservation network	July 2020	Taskforce on Policy
4	Directives on PGR proposed jointly with other initiatives GENRES, Dynaversity etc.	Oct 2020	Project coordinator

4.5 WG 2C: Network Communications

Convenors: Karen Inwood and Jenny Hawley

Chairs: Karen Inwood and Jenny Hawley

Rapporteur: Jenny Hawley

Other participants: Jelke Brandehof, Nataša Ferant, María Luisa Rubio Teso, Paul Townson, Agnese Gailite, Maarit Heinonen, Kostas Konstantinos, Gert Poulsen, Silvia Strajeru and Alexsandar Tabaković

Working Group objectives:

- Discuss communication requirements to engage network stakeholders;
- Propose a communications plan (including timeline) to support the establishment and long-term success of the network.

Summary of introductory presentation:

Effective communications, closely linked to our policy and advocacy activities, are vital to create an enabling environment for the establishment and long-term success of the network. In this final year of the Farmer's Pride project, we need to be clear how to:

- use existing channels of communications and develop new channels if needed
- find the right messages and other tools to engage different stakeholders
- plan the timings of our communications, building on project outputs.

Our communications need to be tailored to each stakeholder group (and sub-groups within them), recognising that they have varying levels of awareness of PGR conservation and use. In particular, our challenge is to engage those outside the PGR sector by relating the issue to their interests, using accessible language and communicating through appropriate formats and channels.

Broad stakeholder groups*:	Existing channels of communication*:
- Farmers and gardeners - PGR conservation sector - Breeding/seed sector - Environmental conservation sector - Policymakers	- Project website - Twitter - Collaborators' own organizations - Existing national and European networks - External conferences and workshops - Specialist newsletters, journals, blogs - Farmer's Pride conference in 2020

**identified in the project Communications and Media Strategy, October 2018*

Farmer's Pride communications will disseminate all the project outputs and engage stakeholders in the project as a whole. For this session, however, we will focus on planning specific communications to support the establishment and long-term success of the network.

Questions for discussion:

- What challenges and opportunities for communications were identified in Session 1?
    - For example, Theo identified a need to challenge the 'myth' that if growers provide access to their landraces then these will be misappropriated and the grower will no longer be able to grow their crops.
- What are the most effective ways of engaging each of the stakeholder groups (and sub-groups within them)?
- What are the most important key messages for each stakeholder group?
- How can we make the most of the other project outputs in Year 3 to engage our stakeholders?

Summary of discussion:

Varied stakeholder groups have different communications needs but, to be engaged, they all need to understand how the network will function and why they should join.

1. Nature Conservation Sector

Challenges and needs

- Lack of awareness of CWR – what they are and whether they have any;
- The need for incentives to join the European network;
- The need to include conservation of CWR in site management plans;
- There is a lack of legal requirement to conserve CWR – needs legislation.

Key messages for joining the network

- Explanation of what CWR are and how to identify them;
- As custodians of important plant genetic resources, they are making an important contribution to future food security;
- Offers a marketing advantage, enabling them to attract more tourists and provide opportunities for wider community engagement – greater public awareness of their site and its importance;
- Can offer opportunities for additional funding;
- Offers technical support for CWR management;
- Opportunity for wider role in sustainable tourism and education;
- Possibility of CWR quality mark, use of network logo and signage (e.g. Syrian site).

2. **PGR Sector** (research, gene banks PGR centres)

Key messages – the network will provide

- Compliance with CBD by providing back-up for *in situ* conservation;
- A direct link with PGR custodians – growers, farmers, CWR sites;
- Access to a wider group of custodians;
- Access to wider range of PGR/wider range of varieties;
- Greater opportunities for reintroduction of PGR to the field;
- Access to knowledge of cultivation methods/benefits;
- Support for their wider role of:
    - gene pool conservation
    - enhancing biodiversity
    - evolving biodiversity
- Opportunities for research of *in situ* PGR.

Communication tools

- Activate the national PGR coordinators and their network;
- Identify in each country key PGR person/network;
- Focal point for Treaty implementation and CBD;
- Individual meetings with key national focal points;
- We need access to the stakeholder survey information at national level to contact key people.

3. **Breeders and seed sector**

- International associations of breeders
- ECOPB
- EUROSEEDS
- EUCARPIA
- organic growers associations
- animal breeders (grazing/conservation connection – local breeds eat LR)

Challenges and needs

- They are interested in what growers are willing to pay for;
- Interested in access to CWR and LR when the context changes – e.g. pesticides ban increases demand for genetic material;
- Want PGR to be easily accessible;
- Can often meet needs from *ex situ* material in the short-term.

4. **Farmers and other LR growers**

- Need intermediaries for many farmers to engage in the network;
- Need labelling/certification for LR produce to help marketing and local benefits;
- Food security contribution;
- Contribute to maintain heritage varieties and history;
- Access to seeds and exchange of knowledge;
- Improved connection with the nature conservation sector.

Conclusions

- **The wider "network" of stakeholders** needs to be distinct from the network of sites/populations and their custodians (Figure 8).

- **The top priority** is to give the network an identity with a name, web presence, prospectus for joining.
- **New mailing list** and regular e-bulletins will be established (accessible at national level) for stakeholders to subscribe.
- **2020 Conference** is a major milestone and we will integrate communications about the conference and the network – we will aim to make it inclusive, with live online streaming and simultaneous translation if possible.
- **Planning the content** of communications is difficult without details of how the network will function.
- **Coordination with Dynaversity** on establishment and communications of any other network(s) is essential.

Figure 8. A preliminary representation of the network stakeholders.

Timeline of agreed actions:

1	Announce the 2020 conference and call for ideas and contributions.	Oct 2019	Plantlife, UoB and all
2	Set up a network/conference communications group.	Nov 2019	Plantlife, Eurosite, UoB, Euroseeds, Bioversity +
3	Resolve issues with existing data on T1.1 survey respondents. The proposed date is just an indication since availability of data is subjected to the signature of the Consortium Agreement where the partners will agree to analyze Personal Data according to clear and shared rules and in accordance with the General Data Protection Regulation EU regulation.	Nov 2019	Plantlife, UNIPG
4	Agree a network name, prospectus and web presence.	Nov 2019	Plantlife, UOB and others
5	Set up a mailing list and send e-newsletters every two months.	Jan-Oct	Plantlife

6	Hold national workshops for participatory engagement with key stakeholders.	April 2020	All
7	Agree communications plan for conference and network launch.	Jan 2020	Communications group
8	Develop network website (to be handed over to long-term network administrator).	Oct 2020	Communications group

4.6 Summary of plenary discussion

Following the WG reports, participants discussed a range of comments and questions regarding the network:

- The definition of the network requires further clarification, e.g. whether it is an umbrella organization or purely a network of sites and populations, and whether members could join via their existing organization (e.g. community seed bank).
- A network of sites is very different from a network of stakeholders; it is important to be clear about this distinction and whether/how the network will accommodate both. A network of sites can be applied to CWR but this is more difficult for landraces, which are intrinsically linked to the farmers as stakeholders.
- The analogy of Natura 2000 sites and Eurosite stakeholders was discussed: Natura 2000 is a network of sites; Eurosite is a network of site managers and other interested stakeholders that represents relevant issues to the EU.
- Inclusion of the user stakeholders (e.g. plant breeders, seed companies) in the network is a unique selling point and this does not relate to individual sites.
- The 'network stakeholders' figure presented by group 2C requires development.
- Potential benefits, added value and contribution for each group of stakeholders in joining the network must be clearly identified and communicated.
- The stakeholder survey demonstrated a wide range of interest and support for the network, providing a good basis for its establishment.
- Long-term central funding for the network is required in order to minimise any membership fees, which is likely to deter farmers and other potential members.
- The role of ECPGR and the EC Directorate-Generals is critical in the establishment and long-term sustainability of the network. The network must be closely linked with ECPGR in order to provide a holistic solution to policymakers and funders.
- In parallel to the 'top down' approach, a 'bottom up' community approach is needed to engage farmers and other local stakeholders. This will help to build a coherent network with widespread support and allow the network to develop organically in some respects. Community meetings or national workshops in pilot countries would be one way to progress this.
- However, timing is now very tight to establish the network in time for the conference and by the end of the project; we must be clear about what can be achieved within this timeframe and how this can be sustained after the project ends. A communications plan for the network after the end of the project is also needed.
- This project provides a very important opportunity to achieve something together. National PGR programmes have demonstrated successes; the Farmer's Pride project and new network could be ways of improving links between farmer communities and national/European levels.

5.0 SESSION 3: ROADMAP FOR THE ESTABLISHMENT OF THE NETWORK

In this final discussion, participants built on the session 2 plenary outcomes to agree a way forward in establishing the network. Following extensive debate, a number of conclusions were agreed, as set out below.

A public version of the 'White Paper' is needed for use by project collaborators in engaging stakeholders in their country/network. This could take the form of a short 'concept note' to enable us to share our ideas and seek endorsement from a wide range of stakeholders. The concept note could either outline different network proposals and form the basis of a stakeholder consultation or set out one proposal (agreed by the project collaborators) and seek external support for this. A taskforce led by Ehsan Dulloo will be established to consider these two options and produce the draft concept note, in consultation with the External Advisory Board and other collaborators.

A proposal for a stakeholder consultation process was discussed: conduct a pilot consultation with selected EU institutions and countries; conclude the consultation by August and produce a more precise concept note for a launch at the conference in October; then secure core funding to obtain a new phase of the development of the network after the end of the project.

A clear timeline for the establishment of the network is needed in the remaining months of the project and beyond; this will be produced by Shelagh Kell with input from the Workshop 2 WG convenors. It was suggested that the network establishment process should address the following issues, arriving at a single picture of the basic elements of the network, how this could develop and how it connects to a broader European genetic resources strategy:

- The benefits of the network in securing political attention and funding for the organizations involved; this would be an important incentive for joining.
- Incentives for countries to nominate sites for the network.
- Ensuring the right people and platforms are available to build trust in the exchange of information, knowledge and seeds – the network should be providing incentives more than imposing/enforcing measures.
- Different levels of engagement with the network – local, national and regional – along with the distinct roles of each stakeholder group.
- Whether there should be two networks at global level – one for CWR, one for landraces – as the issues are very different.
- The challenge of coordinating this network with the Dynaversity network.

6.0 CLOSING SESSION

Chike Mba formally closed the meeting. He noted that the level of enthusiasm was tangible and that the emotive comments were a testament to the proposal made. He said that: the conversation reflects Europe's *de facto* leadership in multilateral systems; the aim of the workshop was to define a way forward and we did justice to all of its objectives; he was confident that where there is a will, there is a way.

He gave thanks to the local host and local organizer, Popi Ralli, to Plantlife International staff Jenny Hawley, Karen Inwood and Lucca Benney for the overall logistical organization of the workshop, and to Shelagh Kell for the preparation of the workshop programme and WG schedule.

ANNEX 1: LIST OF PARTICIPANTS

Farmer's Pride Ambassadors

Regine Andersen	– Fridtjof Nansens Institut, Norway
Külli Annamaa	– Estonian Crop Research Institute
Susanne Barth	– Agriculture and Food Development Authority, Ireland
Claudio Buscaroli	– Centro Ricerche Produzioni Vegetali, Italy
Lothar Frese	– Julius Kühn-Institut, Germany
Vojtech Holubec	– Crop Research Institute, Czech Republic
Albert Imre	– Asociatia Bioagricultorilor, Romania
Hrvoje Kutnjak	– University of Zagreb, Croatia
Paul Olson	– KWS Saat, Germany
Miguel Pinheiro de Carvalho	– ISOPlexis Genebank, University of Madeira, Portugal
Rob Plomp	– De Oerakker, The Netherlands
Tamara Smekalova	– NI Vavilov Research Institute of Plant Industry, Russian Federation
Aleksandar Tabaković	– Ministry of Agriculture, Forestry and Water Management, Serbia
Paul Townson	– Lion Seeds Ltd, United Kingdom
Jens Weibull	– Swedish Board of Agriculture

Farmer's Pride External Advisory Board

Chike Mba	– Food and Agriculture Organization of the United Nations
Merja Veteläinen	– Boreal Plant Breeding, Finland

ECPGR Participants

Dionysia Fasoula	– Agricultural Research Institute, Cyprus
Nataša Ferant	– Slovenian Institute of Hop Research and Brewing
Agnese Gaillite	– LSFRI Silava, Latvia
René Hauptvogel	– National Agricultural and Food Centre, Slovakia
Alban Ibraliu	– Dept. of Agronomy Sciences, Agricultural University of Tirana, Albania
Tatjana Klepo	– Institute for Adriatic Crops and Karst Reclamation, Croatia
Juozas Labokas	– Nature Research Centre, Lithuania
Silvia Strajeru	– Suceava Genebank, Romania
Sreten Terzić	– Institute of Field and Vegetable Crops, Serbia
Katya Uzundzhalieva	– Institute of Plant Genetic Resources – Sadovo, Bulgaria

Other invited experts

Alexander Just	– DG Environment, European Commission
Mary Jane Ramos Dela Cruz	– Secretariat, International Treaty on PGRFA
Imke Thormann	– German Federal Office for Agriculture and Food

Farmer's Pride project partners

Ana Maria Barata	– Instituto Nacional de Investigação Agrária e Veterinária, Portugal
Béla Bartha	– Pro Specie Rara, Switzerland
Lucca Benney	– Plantlife International
Jelke Brandehof	– Eurosite
Leonardo Caproni	– Università Degli Studi di Perugia, Italy
Kristijan Čivić	– Eurosite
Adam Drucker	– Bioversity International
Ehsan Dulloo	– Bioversity International
Judit Fehér	– Research Institute of Organic Agriculture, Hungary
Jenny Hawley	– Plantlife International
Maarit Heinonen	– Natural Resources Institute, Finland
Karen Inwood	– Plantlife International
José Iriondo	– Universidad Rey Juan Carlos, Spain
Shelagh Kell	– University of Birmingham, United Kingdom
Kostas Koutis	– Hellenic Agricultural Organization – Demeter, Greece
Joana Magos Brehm	– Instituto Nacional de Investigação Agrária e Veterinária, Portugal
Helene Maierhofer	– Arche Noah, Austria
Nigel Maxted	– University of Birmingham, United Kingdom
Valeria Negri	– Università Degli Studi di Perugia, Italy
Anna Palmé	– Nordic Genetic Resource Centre
Gert Poulsen	– Danish Seed Savers
Jaime Prohens	– Universitat Politècnica de València, Spain
Lorenzo Raggi	– Università Degli Studi di Perugia, Italy
Parthenopi Ralli	– Hellenic Agricultural Organization – Demeter, Greece
María Luisa Rubio Teso	– Universidad Rey Juan Carlos, Spain
Irene Tzouramani	– Hellenic Agricultural Organization – Demeter, Greece
Theo van Hintum	– Centre for Genetic Resources, The Netherlands
Stefan Versweyveld	– Eurosite

ANNEX 2: CONTEXT AND OVERVIEW OF THE FARMER'S PRIDE PROJECT

Conserving plant diversity for future generations
www.farmerspride.eu
@PGRInSitu | #EUfarmerspride

Funded by the Horizon 2020 Framework Programme of the European Union

Farmer's Pride project overview and workshop objectives

Shelagh Kell
University of Birmingham

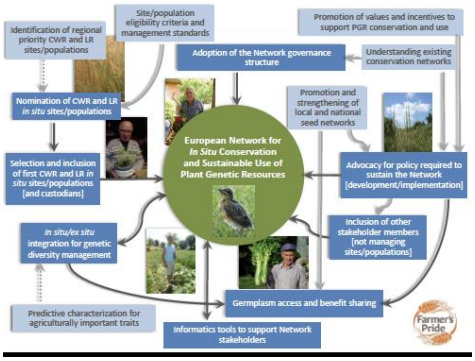
Farmer's Pride Workshop 2
Thera, Santorini, 08–10 October 2019

Plantlife

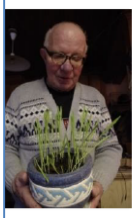
UNIVERSITY OF BIRMINGHAM

In this presentation....

- Overview of the Farmer's Pride project
- Summary of project activities during the first 18 months
- Key outcomes of Workshop 1
- Aim, objectives and structure of Workshop 2



Collaborators



- **19 partner organizations representing the diverse PGR stakeholder community** – farmer, agrobiodiversity, conservation and civil society NGOs; plant breeding/seed sector; public research institutes; protected area networks
- **Farmer's Pride Ambassadors** – to extend the geographical and stakeholder reach of the project and increase the range of expertise
- **External Advisory Board** – to review and evaluate project progress and outputs, and provide advice and guidance

Stakeholder surveys

- Who is interested in *in situ* conservation and SU of PGR? *All stakeholder groups, >1000 responses, 35 countries*
- What are their interests in PGR conservation and use? *All types of PGR*
- Are they interested in joining the Network? *The majority, yes*
  - Who is conserving PGR and where?
  - Which traits are most important to meet future agricultural and market needs? *1400 traits in >61 crops (P&D resistance traits of greatest interest)*
- What are the incentives for farmers to conserve landraces?
- Are they willing to participate in support schemes?
- Public WTP for agrobiodiverse-related goods and services

Surveys made available in different languages proved important for the success rate

Understanding existing networks

- Review of existing networks for PGR conservation
- Very diverse in terms of the stakeholders involved, governance, the materials conserved, conservation practices, and funding
- Stakeholder motivation important for network success
- Long-term funding fundamental to guarantee survival
- Policy related to conservation and ABS fundamental for network operation and longevity
  - Workshops convened in Denmark and Hungary with a focus on enhancing national seed networks
  - Stakeholders from seed-saver organizations, small plant breeding and seed companies, horticulturists, researchers, farmers, chefs, and government agencies

Understanding existing networks

- Workshops revealed the need to:
  - Find ways of making seed networks more self-sustainable and financially independent
  - Seek permanent human resources and funding and establish a secretariat to coordinate national seed network activities
  - Improve the quality of farm-/home garden-saved seeds
  - Improve consumer consciousness/awareness of the importance of agricultural plant diversity
  - Build trust between stakeholders

Enhancing the use of PGR conserved *in situ*

- Exploratory analysis of the issues hindering the use of *in situ* conserved material and possible approaches to overcome them proposed
- First steps to enhance access and use through bilateral meetings with nature protection organizations in The Netherlands
- Pilot website giving an overview of the available diversity in nature and in cultivation in the Netherlands and Turkey

- Workshops, meetings and interviews in Spain, Finland and the Netherlands to improve the integration of *in situ* and *ex situ* conservation highlighted the need for education and advocacy regarding the conservation of CWR
- A pilot study involving collaboration between the Biosphere Reserve 'Sierra del Rincón' and the gene bank of the Universidad Politécnica de Madrid on the integration of *in situ–ex situ* conservation of CWR has been approved

Three stakeholder workshops for discussion and decision-making on the development of the European Network

DK 23–24 Oct 2018	**Establish the foundations for the network** ▪ Define stakeholders' roles and needs ▪ Review and elaborate network processes and practices ▪ Identify governance and policy requirements
GR 8–10 Oct 2019	**Prepare a roadmap for Network establishment** ▪ Agree on standards and procedures for network operation ▪ Define required actions, responsibilities and timeline for Network establishment and promotion
PT 5–8 Oct 2020	**Network launch and policy dialogue** ▪ Convene a high level policy dialogue workshop ▪ Launch and promote the European network ▪ Stakeholder workshop on sustaining the network

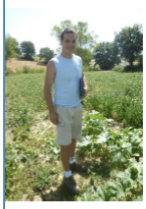
Key outcomes of Workshop 1

- The wide and diverse range of PGR stakeholders presents a challenge for the successful establishment and long-term operation of the European Network
- Must be a strong motivation for stakeholders to join the Network – effective means of communicating the purpose of the Network and benefits of becoming a Network partner tailored for all stakeholder groups is paramount
- Essential to define clear roles for all stakeholders, include a balanced representation of the different stakeholder groups, imbue a sense of ownership, and promote collaboration and cross-sectoral cooperation

Key outcomes of Workshop 1

- Benefits to stakeholders from participation in the Network include:
  - Improved access to and exchange of a greater breadth of PGR and associated knowledge
  - Increased opportunities for collaboration on research, development, marketing and advocacy initiatives
  - Greater recognition of their specific roles in PGR conservation and sustainable use and added value for their activities
  - Collective awareness-raising of the value of conservation and sustainable use actions towards influencing a supportive policy environment
- Transparency regarding the end-use of PGR and building trust between stakeholders is fundamental for success of the Network
- In particular, there is a need to build bridges between the so-called 'formal' and 'informal' sectors, as well as to recognize Farmers' Rights in policies underlying the operation of the Network

Key outcomes of Workshop 1



- The Network should as far as possible build on existing infrastructures (e.g. stakeholder and site networks, relevant organizations/institutes, policy frameworks and legislation), whether at subnational, national, or international level
- It must also cater for the inclusion of individuals, whether farmers, plant breeders, landowners, or other interested stakeholders
- Understanding the strengths and weaknesses of existing infrastructures, as well as commonalities between them, will be fundamental for its successful establishment and long-term operation

Key outcomes of Workshop 1

- Formal recognition and long-term funding of the Network will be essential for its success – as a community, we need to lobby national and European policy-makers, stressing the need for permanent funding for its sustainable operation
- Agreement on good practices for PGR conservation and sustainable use and harmonization of management standards should be sought as far as possible
- Central to the operation of the Network will be the need for good information availability, management, and visibility, and any system used should cater for Network members to share and exchange information

Key outcomes of Workshop 1

- A draft concept for governance of the European Network was prepared and discussed – this has been developed further and is presented in the white paper on establishment of the Network
- Opportunities for using existing policies and legislation to support the operation of the Network, as well as a need for new policies and legislation specifically for PGR conservation and sustainable use were acknowledged
- Of particular note is the need for legislation to protect landraces/farmers' varieties and to enable new markets for farmers' products – political recognition of Farmers' Rights in line with Article 9 of the International Treaty is also essential

Key outcomes of Workshop 1

- Economic incentives are one mechanism for improving the implementation of existing international policies and legislation – however, few mechanisms exist for PGR, funding is very limited, and administrative costs can be high
- The costs and benefits of *in situ* conservation need to be understood so that this can be conveyed to policymakers – this includes the recognition of non-market, private and public values of PGR such as food and nutrition security, safeguarding the environment, income generation, improved livelihoods, and protecting agricultural landscapes and bio-cultural heritage
- Conditions for access and use of PGR in the Network need to be clear – existing laws and mechanisms are complex and off-putting for some stakeholders – a guide to sharing and using PGR could help to explain the complicated rules to encourage and support stakeholders who otherwise may feel excluded

Aim of Workshop 2

Prepare a roadmap (to define objectives, actions, responsibilities and timeline) for the establishment of the European Network during the final year of the project and for its continuity beyond 2020

Workshop objectives

Discussion Session 1 Network sites / populations

Review and discuss proposed site/population inclusion criteria and management standards, the process of their nomination and adoption, and procedures for providing user access to the conserved germplasm and for benefit sharing

Discussion session 2 Network governance, policy & communications

Agree on the Network governance structure, make decisions on how to embed the Network in national, regional and global policy and legal instruments, and develop a communications plan to engage stakeholders

ROADMAP FOR NETWORK ESTABLISHMENT

Workshop participants

- Farmer's Pride project partners
- Farmer's Pride Ambassadors
- Farmer's Pride External Advisory Board
- Other invited experts
- ECPGR *In Situ* Conservation Working Group

Working groups

- Participants split into working groups to address the specific objectives of the workshop as detailed in the WG schedule and working documents
- WG convenors are Farmer's Pride partners or Ambassadors who are leading/contributing to related tasks of the project work programme
- Each WG will be led by a chair, and a rapporteur will be responsible for recording the main outcomes of the discussions
- Convenors will work with the chairs and rapporteurs to prepare reports for the plenary sessions, to include a list of clearly defined essential actions, a timeline and agreed responsibilities for next steps

Working groups

Session 1
- 1A: Standards and procedures for CWR sites/populations
- 1B: Standards and procedures for LR sites/populations
- 1C: Germplasm access and benefit sharing procedures

Session 2
- 2A: Network governance
- 2B: Network policy and advocacy
- 2C: Network communications

Working group convenors


José Iriondo


Luisa Rubio Teso


Shelagh Kell


Valeria Negri


Lorenzo Raggi


Nigel Maxted

Working group convenors


Theo van Hintum


Lothar Frese


Ehsan Dulloo


Adam Drucker


Kristijan Čivić


Béla Bartha


Jenny Hawley


Paul Olson

ANNEX 3: PERSPECTIVES ON ESTABLISHING A GLOBAL *IN SITU*/ON-FARM NETWORK ON CONSERVATION OF PGRFA

Food and Agriculture Organization of the United Nations

The International Treaty on Plant Genetic Resources for Food and Agriculture

Perspectives on establishing a Global In Situ / On-farm Network on Conservation of PGRFA

Mary Jane Ramos Dela Cruz
Technical Officer, ITPGRFA

Farmer's Pride Workshop 2
7-10 October 2019, Santorini, Greece,

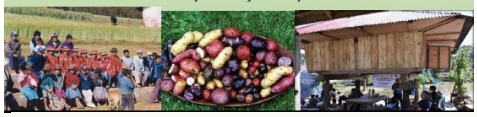
www.fao.org/plant-treaty

Highlights of the training workshop on conservation and sustainable use of PGRFA and FR

In situ / on farm conservation is:

Crops
ommunities
nservation
limate change adaptation

Community Seed Banks are essential and the role of farmers in managing the in situ conservation of crop diversity is indispensable…



Serves as a platform for knowledge sharing and exchange of experiences and lessons learned on management and conservation of PGRFA – building capacities

- ✓ Capacity building and empowerment of farming communities
- ✓ Facilitate access to PGRFA (traditional exchange) and linkage to national genebank
- ✓ Internalizing the importance of / and conservation of PGRFA and its associated ecosystem goods and services to local, national and regional economies

Provide foundation to engage, explore, or develop innovative mechanisms to promote the objectives of the network

- ✓ Mobilize resources and funding as well as political support for the PGRFA by promoting the benefits of conserving and sustaining PGRFA to development, national economies and rural revitalization
- ✓ Entry points of collaboration to gain support and to stimulate ideas for further ways and means to value PGRFA and promote its conservation e.g. how to convert conservation of PGRFA into marketable incomes through rural tourism, eco-labelling, niche markets, promoting local cuisine, etc.

Implementation of Articles 5, 6 and 9

- Organized 3 Regional Training Workshops on Conservation and Sustainable Use of PGRFA and Farmers' Rights (Asia, Africa, LAC)
- The Ad Hoc Technical Expert Group on Farmers' Rights

Key message:

Establishing a Global (and/or Regional/National/ Local in situ / on farm conservation network is important

- Serves as a platform for knowledge sharing and exchange of experiences and lessons learned on management and conservation of PGRFA esp building resiliencies, adaptation to climate change impacts
- Means of advocating for better decisions on PGRFA to influence policy makers, from local action to national, global conservation
- Provide foundation to engage, explore, or develop innovative mechanisms to promote the objectives of the network (e.g. CSBs, PPBs, Seed/Food Fairs, etc)
- The complementarity and integration of ex situ and in situ approaches is crucial and indispensable to overcome the problems of genetic erosion, risk minimization and to cope with climate change

Means of advocating for better decisions to influence policy makers, from local action to national, to global conservation

- ✓ Support lobbying activities at national and local levels through targeted activities .e.g. organizing events to showcase progress and success of Network's activities
- ✓ Campaign for increase funding support, institutional support
- ✓ Ensuring PGRFA stays on local and national agenda, and on the global agenda
- ✓ Promote the ecological, social, cultural, economic importance of PGRFA
- ✓ Promote awareness raising and enhance understanding on the value of PGRFA

Example from a BSF Project Platform in Meso America

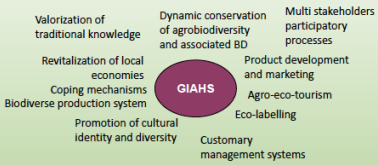
- Countries: Guatemala, Honduras, Nicaragua, Costa Rica
- Lead by CSOs
- 50 producers organisations (Cooperatives, Producers Organisations, Agriculture Research Committees Associations)

Common Objective:
a strategy for food security and climate change

Current achievements:

- 38 active CSBs link to national and regional banks for germplasm conservation
- Participatory plant breeding/ varietal characterization
- 7000 farmers (40% women)
- engage in agrobiodiversity fairs
- Capacity building addressing needs of farmers

Example from FAO
Globally Important Agricultural Heritage System (GIAHS) project



Project activities valuing the role of farmers and indigenous communities in conservation and management of agrobiodiversity, traditional knowledge, and cultural identity.

Lessons learned from the GIAHS project

- Funding is critical but not a requirement
- Should be build on existing institutional mechanism
- An entry point (concept) – to mainstream in their institutional mandates; or to attract support, to engage and take actions
- Tangible results, targets and outcomes ("to see is to believe")
- Awareness raising and advocacy is a continuing process…

Example from FAO
Globally Important Agricultural Heritage System (GIAHS) project

- Started as a project concept in 2002, launched as a project in 2004 with 6 pilot countries (Algeria, Chile, China, Peru, Philippines, Tunisia)
- Overall objective: promote recognition and dynamic conservation of heritage agriculture, agrobiodiversity and associated knowledge systems and culture (ITPGRFA Article 9; CBD Articles 8j; 10c)

Example from FAO
Globally Important Agricultural Heritage System (GIAHS) project

- GIAHS promoted "*a balance between adaptation, conservation and socio-economic development*"
- The initial sites became a learning laboratory and models to others
- GIAHS success created a "movement" (social, technical, institutional)…
- In 2015, FAO elevated GIAHS into Regular Programme
- Currently 52 GIAHS sites in 21 countries including some sites in Europe…

ANNEX 4: GLOBAL PERSPECTIVES

Food and Agriculture Organization of the United Nations

In Situ Conservation and On-Farm Management of PGRFA:
Global Perspectives

Chikelu Mba *et al.* — Chikelu.Mba@fao.org
Seeds and Plant Genetic Resources Team
Plant Production and Protection Division
Agriculture and Consumer Protection Department

Second Workshop of Farmer's Pride:
Networking, partnerships and tools to enhance *in situ* conservation of European plant genetic resources

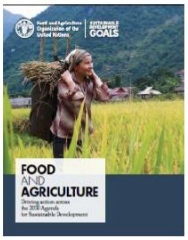
Food and Agriculture Organization of the United Nations

The Tasks Ahead

Food and Agriculture Organization of the United Nations

FAO's Work

- A world without hunger
  - About 820m people (1 in every 9 persons) go hungry
- Challenges
  - An ever-increasing population
  - climate change
  - socioeconomic pressures
  - inelasticity of natural resources
- Target
  - Produce 60% more food (over 2006 figures)



Food and Agriculture Organization of the United Nations

PGRFA as Global Commonwealth

- International Plant Protection Convention 1952
- Convention on Biological Diversity, 1992
  - contracted rather than facilitating exchange and hence, use?
- Global Plan of Action for PGRFA, 1996
- The International Treaty on Plant Genetic Resources for Food and Agriculture, 2001
- Global Crop Diversity Trust, 2004
- Second Global Plan of Action for PGRFA, 2011

Food and Agriculture Organization of the United Nations

Second GPA

- Global framework for the conservation and sustainable use of PGRFA
- 18 Priority Activities under four themes:
  - *In Situ* Conservation and Management
  - *Ex Situ* Conservation
  - Sustainable Use
  - Building Sustainable Institutional and Human Capacities
- Strengthens the implementation of the International Treaty on PGRFA
- Contributes to the achievement of the SDGs
- Country Commitment

Food and Agriculture Organization of the United Nations

Second GPA

***In situ* conservation and management**	1. Surveying and inventorying plant genetic resources for food and agriculture
	2. Supporting on-farm management and improvement of plant genetic resources for food and agriculture
	3. Assisting farmers in disaster situations to restore crop systems
	4. Promoting *in situ* conservation and management of crop wild relatives and wild food plants
***Ex situ* conservation**	5. Supporting targeted collecting of plant genetic resources for food and agriculture
	6. Sustaining and expanding *ex situ* conservation of germplasm
	7. Regenerating and multiplying *ex situ* accessions

Food and Agriculture Organization of the United Nations

Second GPA

Sustainable use of PGRFA	8. Expanding characterization, evaluation and further development of specific subsets of collections to facilitate use
	9. Supporting plant breeding, genetic enhancement and base-broadening efforts
	10. Promoting diversification of crop production and broadening crop diversity for sustainable agriculture
	11. Promoting development and commercialization of all varieties, primarily farmers' varieties/landraces and underutilized species
	12. Supporting seed production and distribution

Food and Agriculture Organization of the United Nations

Second GPA

Building Sustainable Institutional and Human Capacities	13. Building and strengthening national programmes
	14. Promoting and strengthening networks for plant genetic resources for food and agriculture
	15. Constructing and strengthening comprehensive information systems for plant genetic resources for food and agriculture
	16. Developing and strengthening systems for monitoring and safeguarding genetic diversity and minimizing genetic erosion of plant genetic resources for food and agriculture
	17. Building and strengthening human capacity
	18. Promoting and strengthening public awareness on the importance of plant genetic resources for food and agriculture

ANNEX 5: PROPOSAL FOR ESTABLISHING A NETWORK

Conserving plant diversity for future generations
www.farmerspride.eu
@PGRInSitu | #EUfarmerspride

Funded by the Horizon 2020 Framework Programme of the European Union

Farmer's Pride proposal for establishment of the European network for *in situ* conservation and sustainable use of plant genetic resources

Nigel Maxted *et al.*

Farmer's Pride Workshop 2
Santorini, 08–10 October 2019

UNIVERSITY OF BIRMINGHAM

A nice holiday in Santorini

Welcome

But there is no such thing as a free holiday!

A unique opportunity

SFS - 04 [2017] New partnerships and tools to enhance European capacities for in-situ conservation

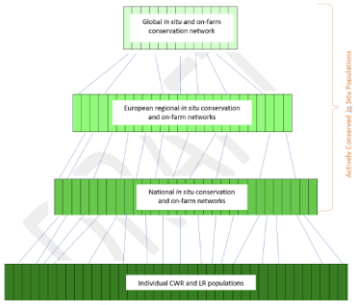
Scope:

Activities will help to build (a) network(s) of in situ (including on-farm and on-garden) conservation sites and stakeholders in order to develop new partnerships between the conservation, farming, gardening and breeding sectors and with the wider public. This will expand capacities to manage genetic resources in more dynamic and participatory ways and to support their use in breeding, farming and the food chain. Cooperation between conservation stakeholders will enhance knowledge of available resources, support the demonstration of in situ genetic resources to the wider public and improve access to this genetic reservoir. Exchanges with the breeding sector will provide openings to identify promising traits from landraces and CWRs and increase their use in breeding. Activities will also contribute to developing and showcasing strategies for in situ conservation and to linking ex situ and in situ conservation efforts more effectively. While targeting in particular European capacities, projects are encouraged to draw on good examples from elsewhere. The work is expected to benefit from the contribution of social sciences. Proposals should fall under the concept of the 'multi-actor approach.

Justifications for establishing the European Network now

- Meeting policy and legislative obligations
- Addressing the threats posed by climate change
- Conserving threatened resources in a globally important hotspot
- Filling the conservation gap
- Filling the germplasm availability gap (Tanksley and McCouch, 1997; Volbrecht and Sigmon, 2005; Feuillet *et al.*, 2008; McCouch *et al.*, 2013)
- Focusing at regional and national levels
- Building on the scientific knowledge foundation established by ECPGR WGs

Building blocks of the European Network: A network of networks



Maxted *et al.*, 2015

Building blocks of the European Network: Functions of the European Network

To be sustainable the Network must work, fulfil its functions:

- Enhanced conservation and sustainable use
- Facilitated coordination
- Enhanced partnerships
- Facilitated access to and exchange of conserved resource and information
- Benefits to local communities

Goal: As good as gene banks

Building blocks of the European Network: Guiding principles of the European Network

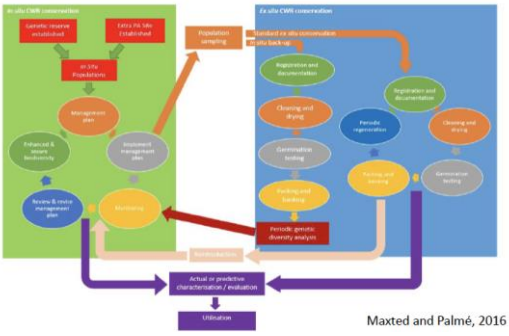
To help the Network achieve its functions:

- Coordination oversight
- Increased awareness of in situ/on-farm PGR value
- Integration of local, national, European and global conservation actions
- A clearinghouse mechanism
- Partnership enhancement
- A platform for *in situ* and on-farm related research
- A platform for dissemination of CWR/LR and in situ/on-farm information and knowledge
- Improved access to *in situ*/on-farm conserved resource
- Technical and policy support

Building blocks of the European Network: Access to diversity via the European Network

- *Raison d'être* for PGR conservation is use, just as true for *in situ* / on-farm conserved resources as *ex situ*
- Two approaches
  a. Directly from *in situ*/on-farm site manager (PA manager or farmer)
  b. Indirectly via *in situ* safety back-up sample held in designated *ex situ* backup gene bank

Building blocks of the European Network: Access to diversity via the European Network



Maxted and Palmé, 2016

Establishing the European Network: Site/population eligibility

Minimum criteria for CWR or LR population inclusion in the Network

Crop wild relatives (Maxted *et al.*, 2015)

- Native at that location, or if introduced been present for >10 generations (>10);
- Contains distinct or complementary genetic diversity, or specific traits;
- Population is not threatened and is actively, extant for ≥50 years;
- Can be sampled regularly for complementary *ex situ* backup;
- Accessible for utilization under ITPGRFA from designated *ex situ* facility;
- Is actively and sustainably managed (see Iriondo *et al.*, 2012).
- Sites collectively are designed to capture maximum genetic diversity.

Landraces (Negri and Raggi pers. comm.)

- Contains distinct or complementary genetic diversity, or specific traits
  - Improves the quality / economic value of the product
  - Is adapted to harsh/marginal conditions
  - Provides a link to local socio-cultural contexts;
- Cultivated by maintainer(s) for at least the next 15 years;
- Accessible for utilization under ITPGRFA from designated *ex situ* facility;

Establishing the European Network: CWR Site/population management

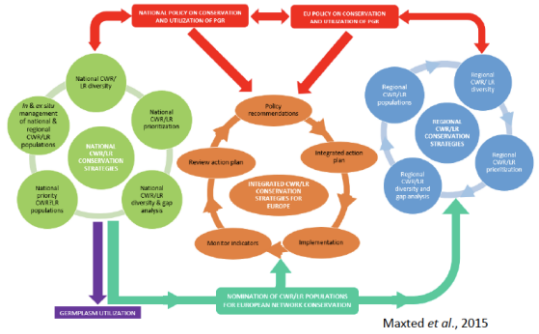
Minimum quality standards proposed for CWR population management (adapted from Iriondo *et al.*, 2012).

- **Location**
  - Located following rigorous scientific process
  - Located in a protected area network or less formal but recognized site
- **Spatial structure**
  - Clear boundaries of the site should be defined
  - Large CWR populations and associated abiotic / biotic processes
- **Target taxa**
  - Demographic survey of target CWR taxa has been carried ou within site
- **Populations**
  - Target CWR populations sizes are large enough to sustain populations in the long-term
- **Management**
  - Site recognized by appropriate national agencies
  - Management plan formulated
  - Monitoring plans are designed and implemented
  - Local community involved in site management
  - Clearly-defined procedure to regulate the use of genetic material
- **Quality standards for the protected areas**
  - Site has legal foundation
  - Site management plan acknowledges conservation of PGR genetic diversity

Establishing the European Network: Site / population identification/nomination process

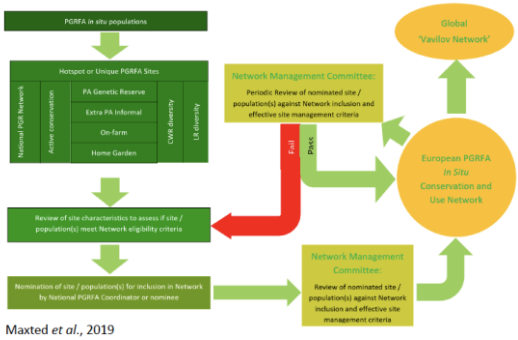
1. Identification of CWR/LR sites/populations of particular value worthy of inclusion in the Network through national, regional (or even global) research initiatives.
2. Review of recommended sites/populations by the appropriate national authorities to establish whether they meet the eligibility criteria.
3. National authorities send their nominations with supporting documentation to the Secretariat of the Network management committee
4. Network management committee members assess if it meets site eligibility criteria and if the *in situ* site nomination descriptors are complete. Accepted or sent back to the national PGR coordinator for amendment.

Establishing the European Network: Site / population scientific identification/nomination process



Maxted *et al.*, 2015

Establishing the European Network: Site / population identification/nomination process



Maxted *et al.*, 2019

Establishing the European Network: Governance structure

The governing body will:

- Assessment of whether nationally nominated sites meet minimum criteria for inclusion in the Network;
- Periodic review of nationally managed sites to ensure they continue to meet minimum criteria for inclusion and population management;
- Promote dynamic *in situ* conservation regionally and nationally of important CWR/LR diversity;
- Promote access to *in situ* conserved CWR/LR diversity linked to sustainable utilization and ensure benefit sharing;
- Provide advice, expertise and access for site managers (*in situ* CWR and LR conservation and ABS);
- Assist with provision of grants, in-kind assistance and co-financing to go with regional and national support;
- Provision of management tools, protocols and training for Network site management;

Establishing the European Network: Governance structure Cont.

The governing body will also:

- Develop effective strategies for gathering, documenting and disseminating information on conserved resource;
- Research projects to countries and make proposals on the organization of regional or international cooperation;
- Coordinate international cooperation of Member States participating in the Network;
- Coordinate international scientific programmes in Europe and outside of Europe related to PGR research;
- Consult with international NGOs on scientific or technical questions;
- Increase awareness of the importance to agriculture and the environment of CWR and LR diversity.
- Network Management Committee is composed of ???? EC Directorate Generals, ECPGR (ExCo), On-farm and In Situ WG, (including national gene bank representatives), Agro- and in-garden conservation NGOs, and Euroseeds

Establishing the European Network: Benefit of Network membership

- The prestige of belonging to an international community of appreciation and concern for the value of PGR diversity
- Assistance with facilitated access and ABS to the conserved resources for sustainable use
- Assistance with identifying, preserving and promoting CWR and on-farm conservation
- Emergency assistance to mitigate the impact of sudden threats on CWR / LR populations
- Financial assistance for heritage conservation projects from a variety of sources
- Advice on population management and development of added value and enhanced value chains to help sustain populations

The Network established

ANNEX 6: DISCUSSIONS ON EU ACTIVITIES IN SUPPORT OF GENETIC RESOURCES AND AGROBIODIVERSITY

Farmers' Pride

Webex contribution to discussions on EU activities in support of genetic resources and agrobiodiversity

10 October 2019

Genetic resources: cutting across several policies and competences at EU level

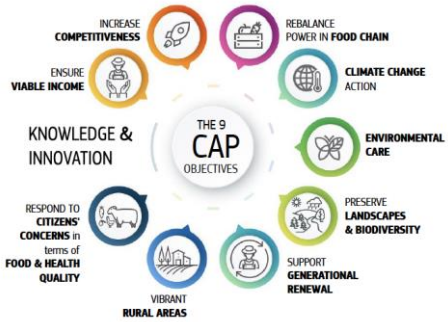
- Convention on Biological Diversity, Nagoya and other biodiversity policies/activities: DG Environment
- TPGRFA and seed legislation: DG SANTE
- Patents (incl. in breeding): DG GROW (SANTE)
- Promotion and use of GenRes in agriculture (and forestry): DG AGRI
- Research and innovation for GenRes in agriculture and forestry: DG AGRI (DG RTD)

Record of AGRI funding for GenRes under SC2 H2020

2014	• Traditional resources for agricultural diversity and the food chain • Projects: DIVERSIFOOD; TRADITOM; TREASURE	(10m€)
2015	• Management and use of genetic resources (focus on ex-situ) • Projects: G2P-SOL; GenTree; IMAGE	(20m€)
2016	• Several topics to increase interspecific species diversity • Projects: ReMIX; DIVERsify; Diverfarming; DiverIMPACTS • EU-China cooperation: EUCLEG	(30m€) (5m€)
2017	• Networking and improving capacities for in-situ conservation • Projects: FARMERS' PRIDE; DYNAVERSITY	(4m€)
2018-20	• Joining forces for GenRes and biodiversity management (CSA, 2018) • Project: GENRES BRIDGE • Adding value to plant GenRes (RIA, 2019) • Capitalising on native biodiversity in farmland landscape (RIA, 2019) • The GenRes-user interface and pre-breeding activities (IA, 2020) • From agrobiodiversity to dynamic value chains (2020)	(3m€) (14m€) (8m€) (14m€) (6m€)

Agricultural research under Horizon 2020 supporting GenRes

Objectives of Common Agricultural Policy



THE NEW CAP: DEVELOPING A KNOWLEDGE-BASED AGRICULTURE

- **Cross-cutting objective** on knowledge, innovation and digitalisation
- Each **CAP strategic plan** will include a section on how to **stimulate** the **exchange of knowledge and innovation** & the development of **digital technologies** in agriculture
- Strengthening of the **Agricultural Knowledge and Innovation System**
- **Advice, training, innovation and knowledge support** in Rural Development
- **Specific budget of EUR 10 billion** in Horizon Europe for food, agriculture, rural development and the bio-economy.
- Continuation of the agricultural **European Innovation Partnership**

New Commission priorities

- ✓ A European Green Deal
  - *A Biodiversity Strategy for 2030*
  - *"Farm to Fork Strategy" on sustainable food*
- ✓ An economy that works for people
- ✓ A Europe fit for the digital age
- ✓ Protecting our European way of life
- ✓ A stronger Europe in the world
- ✓ A new push for European democracy

European Commission

Thank you!

#FutureofCAP

https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap_en

#HorizonEU

http://ec.europa.eu/horizon-europe

European Commission | Agriculture and Rural Development

ANNEX 7: NATURA 2000 ESTABLISHING A NETWORK

Natura 2000

Establishing a network

Alexander Just
European Commission, DG Environment
9.10.2019

The EU Nature Directives

Birds Directive (1979) + Habitats Directive (1992)

Central EU policies for **biodiversity protection** in the EU28, focussing on the conservation of :

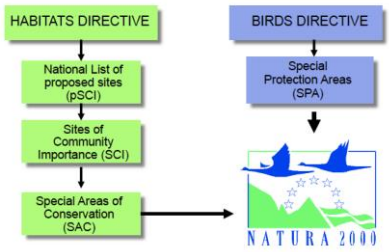
- all wild bird species naturally occurring in the EU (Birds Directive)
- ~1300 species and 231 habitat types of Community interest (Habitats Directive)

Aim at **favourable conservation status**, defined as:

- natural range & distribution within range either stable or increasing
- structure and functions for its long-term maintenance at there
- habitats: conservation status of the typical species is favourable
- species: sufficiently large habitat to maintain populations in long term

Both directives have a **site protection** & a **species protection** pillar

Natura 2000 – based on two EU Directives



CRITERIA FOR SELECTING SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE AND DESIGNATION AS SPECIAL AREAS OF CONSERVATION

STAGE 1: Assessment at national level of the relative importance of sites for each natural habitat type in Annex I and each species in Annex II (including priority natural habitat types and priority species)

A. *Site assessment criteria for a given natural habitat type in Annex I*

(a) Degree of representativity of the natural habitat ►C1 type on the site. ◄

(b) Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within national territory.

(c) Degree of conservation of the structure and functions of the natural habitat type concerned and restoration possibilities.

(d) Global assessment of the value of the site for conservation of the natural habitat type concerned.

B. *Site assessment criteria for a given species in Annex II*

(a) Size and density of the population of the species present on the site in relation to the populations present within national territory.

Natura 2000: main features

Site protection pillar of EU Nature Directives, focussing on:

- 193 bird (sub)species in Annex I + regularly occurring migratory bird species (Birds Directive)
- 869 taxa (at species or genus level), incl. ≥ 297 animal species, and 231 habitat types of Community interest (Habitats Directive)

A coherent network of sites, **selected on scientific criteria:**

- representativeness of sites in terms of distribution and area for each of the species & habitats of Community Interest
- should cover species & habitats across their entire natural range in the EU, irrespective of political boundaries

Management of the sites to maintain or improve conservation status

Strong **legal protection at site level**, although new activities or developments are not automatically excluded

Current status of Natura 2000

covers **18,0% of EU land** and ca. **6% of marine area** of the EU Member States, in **27 863 sites** (Birds and Habitats Directive)

terrestrial part of the network now almost complete

increasing focus over time on **site management** and **financing of Natura 2000**, and on enhanced collaboration with land owners & users

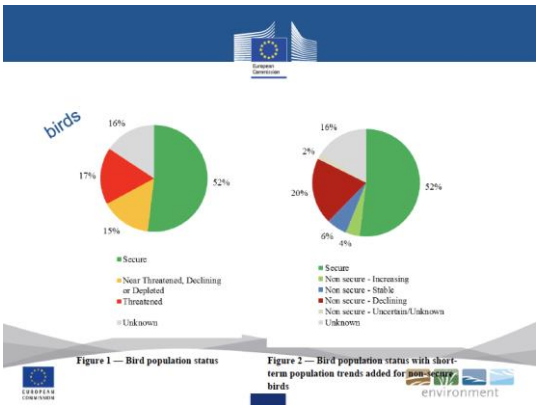


Figure 1 — Bird population status

Figure 2 — Bird population status with short-term population trends added for non-secure birds

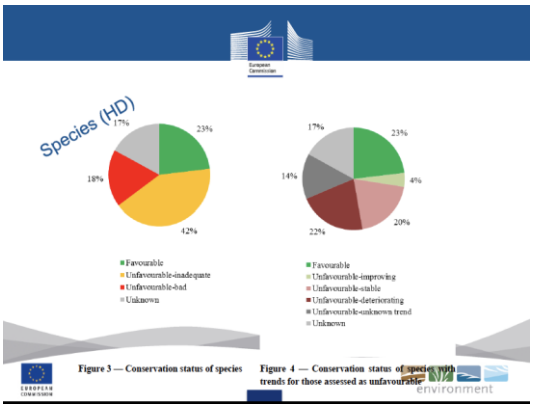
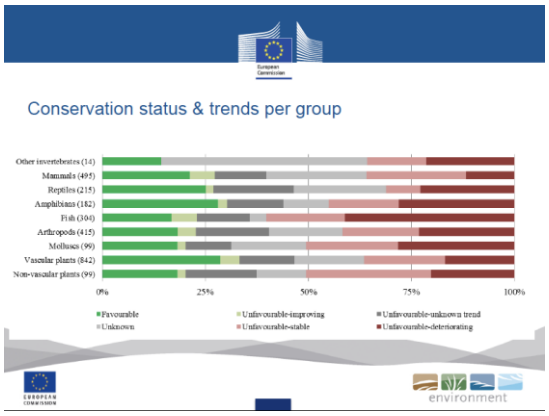


Figure 3 — Conservation status of species

Figure 4 — Conservation status of species with trends for those assessed as unfavourable



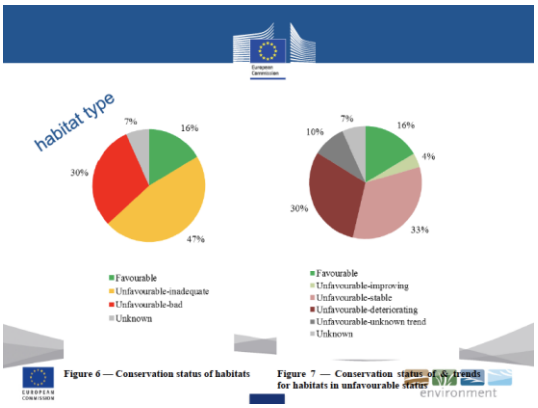
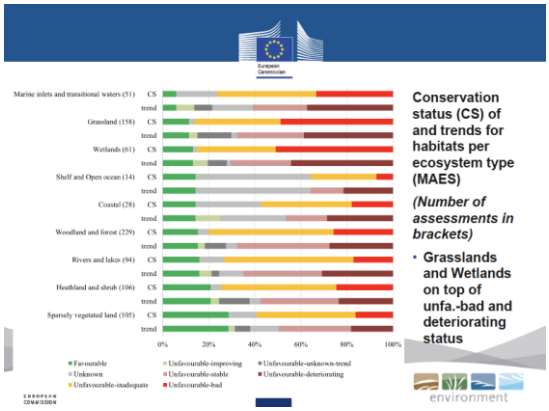
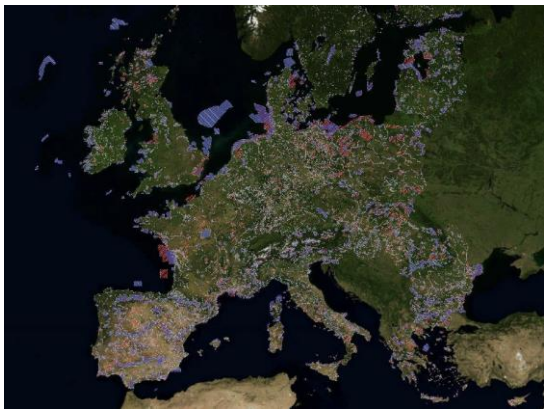
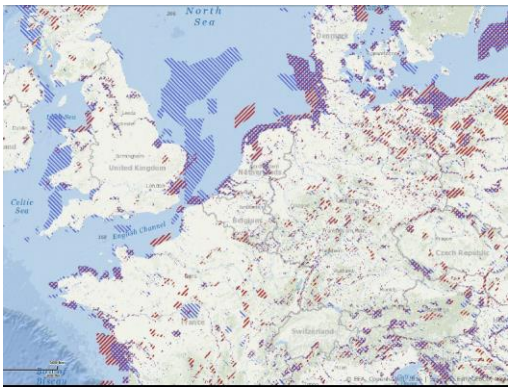


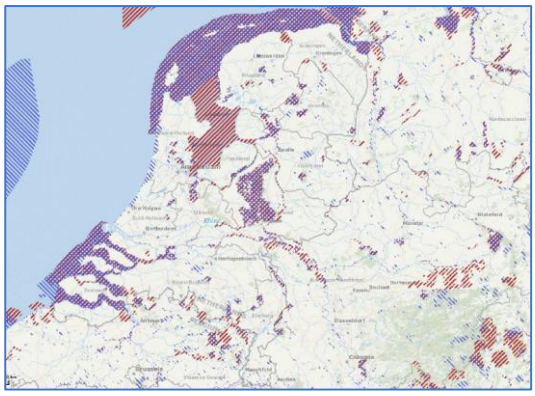
Figure 6 — Conservation status of habitats

Figure 7 — Conservation status of & trends for habitats in unfavourable status









Natura 2000 and agriculture

- a very important share of the Natura 2000 habitat types and species are strongly dependent on the maintenance or imitation of traditional agricultural practises
- some of these species and habitats are extremely sensitive to land use changes (e.g. switch from moving to grazing, etc.), hydrological changes and/or fertilisation
- main threats are **intensification** and **land abandonment**
- need for **targeted** & **continuous** agricultural management
- ultimately, **dependency on viable agricultural systems !**

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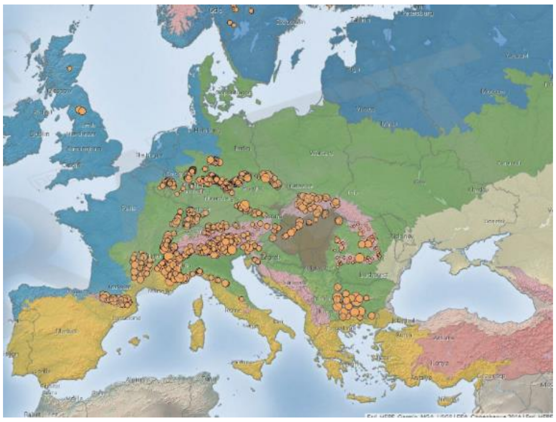
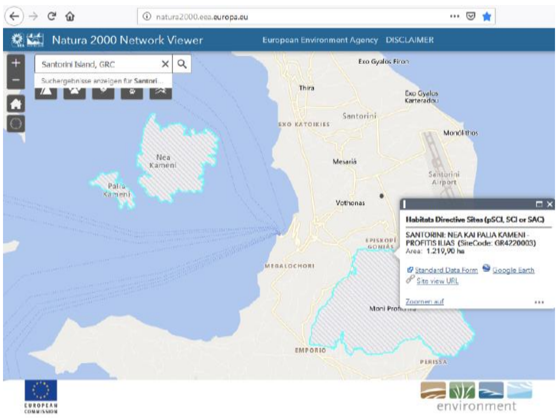
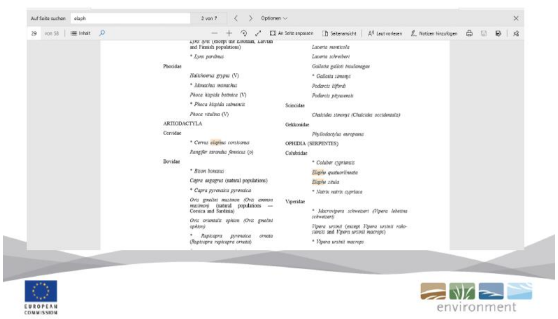
environment

example: 6520 "mountain hay meadows"







Important information sources:

- Farming for Natura 2000: http://ec.europa.eu/environment/nature/natura2000/management/docs/FARMING%20FOR%20NATURA%202000-final%20guidance.pdf
- Habitat types dependent on agricultural practises: http://ec.europa.eu/environment/nature/natura2000/management/docs/FARMING%20FOR%20NATURA%202000-ANNEXES%20A-D-final.pdf
- EU-wide Natura 2000 database: https://www.eea.europa.eu/data-and-maps/data/natura-8
- Natura 2000 Viewer: http://natura2000.eea.europa.eu/
- EU-wide Article 17 datase: https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-1
- Article 17 Reporting Viewer: https://bd.eionet.europa.eu/article17/reports2012/

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environment

ANNEX 8: GLOSSARY

ABS – Access and benefit sharing

CSBs – Community seed banks

CWR – Crop wild relatives

DOI – Digital Object Identifier

EAB – External Advisory Board

ECPGR – European Cooperative Programme for Plant Genetic Resources

ELC – Eco-geographical Land Characterisation

ENCA – European Nature Conservation Agency

FAO – Food and Agriculture Organization of the United Nations

FP – Farmer's Pride

FPAs – Farmer's Pride Ambassadors

GPA – Global Plan for Action

ITPGRFA MTA – International Treaty on Plant Genetic Resources for Food and Agriculture Material Transfer Agreement

LR – crop landraces

MLS – Multilateral System

NC – National Coordinator

PA – Protected Area

PGR – Plant genetic resources

PGRFA – Plant genetic resources for food and agriculture

P&D – Pests and diseases

UNIPG – University of Perugia

UoB – University of Birmingham

UPOV – Union for the Protection of New Varieties of Plants

WG – Working group