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Periodic Technical Report

Part B

Period covered by the report: from [01/11/2017] to [30/04/2019]

Periodic report: 1st

Contents

List of commonly used acronyms

ABS	–	Access and benefit-sharing
CC	–	Consortium Committee
CWR	–	Crop wild relative(s)
CSB	–	Community seed bank
DG	–	Directorate General
EAB	–	External Advisory Board
EC	–	European Commission
ECPGR	–	European Cooperative Programme for Plant Genetic Resources
EUCARPIA	–	European Association for Research on Plant Breeding
FAO	–	Food and Agriculture Organization of the United Nations
FPA	–	Farmer's Pride Ambassador
GDPR	–	General Data Protection Regulation
GIS	–	Geographical Information System
LR	–	Landrace(s)
MCPD	–	Multi-crop Passport Descriptors
NGO	–	Non-governmental organization
PGR	–	Plant genetic resources
PGRFA	–	Plant genetic resources for food and agriculture
PM	–	Project Manager
PMs	–	Person-months
SC	–	Steering Committee
WP	–	Work package

Beneficiary acronyms

1	UOB	–	University of Birmingham, United Kingdom (Coordinator)
2	BIOVER (IPGRI)	–	Bioversity International
3	UNIPG	–	University of Perugia, Italy
4	NORDGEN	–	Nordic Genetic Resource Centre
5	URJC	–	Universidad Rey Juan Carlos, Spain
6	PSR	–	Pro Specie Rara, Switzerland
7	WUR	–	Wageningen University and Research, Netherlands
8	EUROSITE	–	Eurosite
9	OMKI	–	Research Institute of Organic Agriculture, Hungary
10	IPK	–	Leibniz Institute of Plant Genetics and Crop Plant Research, Germany
11	AARI	–	Aegean Agricultural Research Institute, Turkey
12	LUKE	–	Natural Resources Institute, Finland
13	BPGV (INIAV)	–	Instituto Nacional de Investigação Agrária e Veterinária, Portugal
14	DIMITRA	–	Hellenic Agricultural Organization – Demeter, Greece
15	DSS	–	Danish Seed Savers, Denmark
16	ARCN	–	Arche Noah, Austria
17	UPV	–	Universitat Politècnica de València, Spain
18	PLANTLIFE	–	Plantlife International
19	ESA	–	European Seed Association

1.0 Project objectives for the period

1.1 Work package objectives

During months 1–18, progress was made towards achieving the following general[1] and specific[2] work package (WP) objectives.

WP1: Networking options

General objectives

- Identify *in situ* PGR conservation and use stakeholders (Task 1.1)
- Gather information about current *in situ* LR and CWR diversity conservation activities (Task 1.2)

Specific objectives

- Identify *in situ* PGR conservation and use stakeholders (Deliverable 1.1)
- Undertake a review of European and non-European PGR *in situ* networks (Milestone 1)
- Gather information about current *in situ* CWR and LR diversity (Deliverable 1.2, Milestone 2)

WP2: Population management

General objectives

- Prepare and circulate a document where examples of landrace *in situ* management are reported (Task 2.1)
- Convene two seed networking workshops in each of the case study countries, Denmark and Hungary (Task 2.2)
- Develop the CWR population management guidelines (Task 2.3)
- Outline requirements and roles for the development of the informatics tools (Task 2.4)
- Prepare a proposal for data exchange formats for *in situ* CWR and on-farm LR data (Task 2.5)
- Analyse the complementarity between *in situ* and *ex situ* conservation and test a back-up strategy in the Netherlands and Spain (Task 2.6)

Specific objectives

- Publish a report on CWR in European protected areas (Milestone 19)

WP3: Enabling conservation and use

General objectives

- Assess existing EU Rural Development Plans (RDPs) and other schemes for incentivizing the conservation and use of LR and CWR diversity, including identification of the payment levels required to cover farmer opportunity costs (Task 3.1)

[1] Objectives are related to the tasks shown in parentheses.
[2] Specific WP objectives are based on the deliverables and milestones due to be delivered/achieved in the period and are therefore not included for all WPs.

- Develop and apply a questionnaire aimed at supporting the identification of most needed traits for satisfying future agricultural and market needs (Task 3.2)
- Create an infrastructure to promote and facilitate access to *in situ* conserved diversity (Task 3.3)
- Explore the general public's willingness to pay for conservation based on the market and non-market values they associate with agrobiodiverse-related products (Task 3.4)
- Ensure that a policy dialogue will be established with key policy-makers and high level stakeholders (Task 3.5)

Specific objectives

- Prepare an interim report on the preparation and circulation of the farmer questionnaire (Milestone 13)
- Prepare an interim report on the assessment of existing LR and CWR conservation incentive schemes (Milestone 14)
- Prepare an interim report on the development and application of a stated preference total economic value (TEV) survey (Milestone 15)

WP4: Network design and implementation

General objectives

- Investigate potential structures for the integration of national and regional PGR conservation strategies for Europe and the establishment of a European network for *in situ* conservation and sustainable use of plant genetic resources (Task 4.1)
- Initiate work on the development of the *in situ* CWR and LR conservation strategies for Europe (Tasks 4.2 and 4.3)

Specific objectives

- Make recommendations for the establishment and implementation of the European Network for *in situ* Conservation and Sustainable Use of Plant Genetic Resources (Deliverable 4.1)

WP5: Dissemination

General objectives

- Develop the project's communications and media strategy (Tasks 5.1 and 5.2)
- Publish the project website (Task 5.3)
- Promote best practices and improved networking within the European PGR community (T5.4)
- Develop advocacy to improve *in situ* conservation and sustainable use of PGR for target stakeholder groups (Task 5.5)
- Publish project newsletters and other publications (Task 5.6)
- Organize and convene Workshop 1 (Task 5.7)
- Begin planning for the final dissemination conference (Task 5.8)

Specific objectives

- Publish the project website (Deliverable 5.2, Milestone 22)
- Publish the project's communications and media strategy (Deliverables 5.3 and 5.4, Milestones 23 and 24)
- Publish advocacy plans for different stakeholder groups (Deliverable 5.7, Milestone 26)

WP6: Project management

General objectives

- Ensure the effective management of WPs 1–5, including the completion of project milestones, submission of deliverables, and management of risks (Task 6.1)
- Undertake efficient overall management of the project and ensure compliance with contractual obligations and European Commission (EC) regulations (Task 6.2)
- Evaluate project progress by convening consortium and technical review meetings, and through project reports and regular online meetings (Task 6.3)
- Establish a robust communication infrastructure between project partners and promote interaction within and between work packages (Task 6.4)
- Ensure appropriate ethical standards are maintained in relation to the protection of human participants in the project (Task 6.5)

Specific objectives

- Produce the ethical research plan (Deliverable 6.1)
- Produce the kick-off meeting report (Deliverable 6.2, Milestone 29)
- Produce the data management plan (Deliverable 6.3)
- Produce the first annual consortium meeting report (Deliverable 6.4, Milestone 30)

1.2 Work package tasks

In order to make progress towards/meet the stated objectives, activities were undertaken related to the following tasks:

- **WP1: Networking options** – 1.1: Identify *in situ* stakeholders; 1.2: Knowledge of *in situ* resources/sites
- **WP2: Population management** – 2.1: LR population management; 2.2: Community seed bank (CSB) management; 2.3: CWR population management; 2.4: Informatic tools; 2.5: Facilitating *in situ* conserved diversity use; 2.6: Integrated *in situ* and *ex situ* conservation
- **WP3: Enabling conservation and use** – 3.1: Incentives for conservation/use; 3.2: Identify useful *in situ* traits; 3.3: Enhance use of *in situ* conserved PGR; 3.4: Public willingness to fund PGR maintenance; 3.5: Policy dialogues

- **WP4: Network design and implementation** – 4.1: Integrated network structures; 4.2: LR network design; 4.3: CWR network design

- **WP5: Dissemination** – 5.1 & 5.2: Communication and media strategy; 5.3: Project website; 5.4: Best practice promotion and dissemination; 5.5: Targeted advocacy; 5.6: Project newsletters and publications; 5.7: Project workshops; 5.8: Dissemination conference

- **WP6: Project management** – 6.1: Work package and risk management; 6.2: Reporting and overall project management; 6.3: Project evaluation; 6.4: Intra-project communication; 6.5: Ethical research

2.0 Work progress and achievements during the period

2.1 WP1: Networking options (WP leader: UNIPG)

In WP1 the consortium is reviewing the options available for the development of the network of stakeholders and sites that together will form the European network for *in situ* conservation and sustainable use of PGR that will be implemented by the end of the project (via WP4). Specifically, in this WP the project is elaborating how CWR and LR populations at multiple sites managed by multiple stakeholders can be integrated, and providing 'showcases'—exemplary collaboration platforms as potential models for European-wide/broader European implementation.

2.1.1 Task 1.1: Identify in situ *stakeholders (Months 1–20)* *Task leaders: UNIPG, UOB. Involved partners: All +FPAs*

Review of European and non-European PGRFA *in situ* stakeholders, networks and network structures

Stakeholder survey

In order to identify the stakeholders that are involved, or have an interest in conservation and sustainable use of PGR *in situ* in Europe, UNIPG developed a survey in collaboration with UOB and PLANTLIFE using the online platform EUSurvey[3]. The survey included three main sections:

1. Respondents' contact information and area of work.
2. Respondents' roles and interests in the *in situ* conservation of PGR.
3. Communication needs.

A pilot test of the survey was conducted within the project consortium by partners AARI, DIMITRA, OMKI, PLANTLIFE, UPV and URJC. To maximize the potential number of respondents across Europe, the questionnaire was initially prepared in English and subsequently translated into nine additional languages: Italian (UNIPG), French (ESA), German (IPK), Spanish (URJC), Turkish (AARI), Greek (DIMITRA), Hungarian (OMKI), Dutch (EUROSITE) and Finnish (LUKE).

The survey was launched on 03 May 2018 and closed on 01 April 2019. Although the original intention had been to keep the survey open to month 8 (June 2018), the project Steering Committee decided to keep the survey open for a longer period to maximize the opportunity to identify stakeholders from as wide a range of countries and stakeholder groups as possible. During this period, the survey was disseminated to a very large number of potentially interested stakeholders via the Farmer's Pride project partners who have been highly active in disseminating the survey (see Box 1), as well as via

[3] https://ec.europa.eu/eusurvey/

the project's Farmer's Pride Ambassadors (FPAs) and External Advisory Board (EAB), and the European Cooperative Programme for Plant Genetic Resources (ECPGR) On-farm Conservation and Management and Wild Species Conservation in Genetic Reserves Working Groups[4].

UNIPG carried out a preliminary analysis of the responses collected up to October 2018 (840) for presentation and discussion at Workshop 1 and a final analysis after the closure of the survey (Deliverable 1.1). A total of 1022 responses were collected during the consultation period from 35 different European countries. Results of the consultation are of great interest for a better comprehension of the complex community involved in *in situ* conservation of PGR in Europe.

Box 1. Examples of activities to disseminate the stakeholder survey at national level by Farmer's Pride partners

Austria
Protected site managers (national parks, nature conservation areas), seed-saver organizations, the public gene bank, breeders, relevant ministries and policy-makers, were contacted via email. Contacts who were also relevant for other surveys (Tasks 1.2 and 3.2) were contacted by telephone and reminded to also complete the stakeholder survey. The survey was also promoted by an ARCN newsletter, homepage and social media to ARCN members (including 400 landrace seed guardians) and the general public.

Denmark
The invitation to complete the survey was translated to Danish and sent to the Ministry of Agriculture PGR Board and an agro-genetic resources newsletter, posted as news on the Danish Seed Savers website and disseminated among participants in the Farmer's Pride workshop, 'Networks for Diversity Seeds in Denmark', 09 June 2018.

Finland
Participants of the Nordic Heritage Cereal Conference (65), fruit and berry PGR researchers in Nordic and Baltic countries (49), landrace cereals Facebook group (> 100), and the National Advisory Board for Genetic Resources.

Greece
Potential stakeholders from the breeding and conservation sector, relevant NGOs, ministries and policy-makers, protected sites managers, universities and technological institutes, public research institutes including members of DIMITRA, farmers' networks and associations etc. The hard copy of the survey was actively disseminated through individual interviews among farmers (during on open day at the end of August) and the link with the Greek translation has been disseminated to a large number of potential interested stakeholders in Greece and Cyprus with a short text for the FP project and the survey, and the request to complete it and distribute it further. It was also distributed via a big mailing list from the Ministry of Rural Development and Food.

Hungary
By mail to OMKI partners, representatives of the ministries and policy-makers, breeding sector, universities, advocacy organizations, stakeholder associations; direct mail, telephone and personal meetings with farmers, CSB members, NGO members and national gene bank employees; in person during meetings and workshops (Hungarian networking workshop 21 June, Ecovillage meeting 12 August); via the OMKI website and in social media.

Italy
Farmers' trade associations, national park contacts, officers in charge of PGR conservation of the 20 Italian Regions, and researchers affiliated to the Italian Society of Agricultural Genetics.

[4] www.ecpgr.cgiar.org/working-groups/on-farm-conservation/; www.ecpgr.cgiar.org/working-groups/wild-species-conservation/

Nordic region (Denmark, Finland, Iceland, Norway and Sweden)
29 Nordic CWR stakeholders and 36 members of NordGen Working Groups.

Portugal
Potential stakeholders from the conservation sector, NGOs, ministries and policy-makers, universities and technological institutes, public research institutes, farmers' associations, as well as several fora related to genetic resources conservation.

Spain
64 potential interested stakeholders (11 farmers and gardeners and their organizations, 22 from the breeding/seed sector, 17 from the PGR conservation sector, 11 from the environment conservation sector, and three policy-makers), as well as through social networks (Facebook and Twitter) and two large mailing lists (AEET – Spanish Association of Terrestrial Ecology, and SEBiCoP – Spanish Society of Plant Conservation Biology).

Switzerland
The survey was sent to the 50 member organizations of the Swiss Commission for the Conservation of Cultivated Plants (www.cpc-skek.ch/) and a newsletter was circulated to selected seed-savers with a request to complete the survey.

Turkey
Dissemination via letter, and /or email and/or personal communications to: 82 potential public stakeholders and 1004 Directorate of Provincial/District of Agriculture and Forestry (MAF); 46 agricultural research institutes involved in plant breeding studies; 37 State Farms; Public national parks/Nature protection Department/Directorate of Sensitive Areas of MAF; 171 universities (public and private); 185 Turkish seed associations and private seed companies; 13 botanical gardens; 58 NGOs to disseminate among their members; 37 mailing lists via personal communication provided by the FPA of Turkey from different potential stakeholders; mailing list (58) provided from Conservation of Landraces Workshop held by AARI; farmers' mailing list (41) sent by Agricultural Extension and in-service Training Centre; social networks (Facebook) for disseminating the survey to farmers; personal communication to TaTuTa "Eco-Agro Tourism and Voluntary Knowledge and Skills Exchange on Organic Farms project for disseminating the survey to the project farmers (90 farms).

United Kingdom
The Farmer's Pride Project Coordinator gave a briefing on Farmer's Pride at a meeting of the UK Plant Genetic Resources Group—a government advisory committee involving stakeholders from the breeding and conservation sectors, NGOs, ministries and policy-makers, protected site managers, universities and technological institutes, and public research institutes. Members were encouraged to complete the survey at this briefing and by subsequent email communication.

Review of non-European PGRFA *in situ* stakeholders, networks and network structures

UNIPG prepared two examples of *in situ* PGR networks and requested all the project partners and FPAs to provide examples of European and non-European networks using a similar model. Descriptions of 14 European and three non-European networks were provided by project partners UNIPG, WUR, URJC, LUKE, DSS, NORDGEN, DIMITRA, OMKI, AARI, BIOVER and UOB, as well as by the FPA from the Julius Kühn-Institut (JKI), Germany. The following case studies are included (Milestone 1):

1. Conservation and Safety Network of Lazio Region, Italy (UNIPG)
2. Stichting De Oerakker, Netherlands (WUR)
3. Plant Micro-Reserves network, Valencian Autonomous Community, Spain (URJC)

4. Network for Nordic heritage cereal varieties (LUKE)
5. Pro-loco Cave, Italy (UNIPG)
6. Frøsamlerne (Danish Seed Savers) (DSS)
7. The Finnish Landrace Association (LUKE)
8. Informal Nordic Crop Wild Relative Network (NORDGEN)
9. AEGILOPS – Greek Network for Biodiversity and Ecology in Agriculture (DIMITRA)
10. ÖMKi on-farm network, Hungary (OMKI)
11. Kárpát-Medencei Gyümölcsész Hálózat (Orchard Network of the Carpathian Basin), Hungary (OMKI)
12. Magház (Seed-house) Community network for agricultural diversity, Hungary (OMKI)
13. Seed Exchange Network and TaTuTa Ecological Farm Visit Programme of Buğday Association for Supporting Ecological Living, Turkey (AARI)
14. Genetic Reserve Network for Wild Celery, Germany (JKI)
15. SADC Plant Genetic Resources Centre (SPGRC), Southern Africa (BIOVER)
16. Asia Pacific Forest Genetic Resources Programme (APFORGEN) (BIOVER)
17. Sri Lankan Case on Conservation and Sustainable Use of Crop Wild Relatives (CWR) (UOB)

The project partners are discussing options for publishing this information, possibly via an online interactive map.

UNIPG presented the results of an analysis of the provided examples at Workshop 1 in October 2018. The results show that networks are very diverse regarding the involved stakeholders, governance, conserved materials, best practices related to conservation, description, multiplication and commercialization, as well as concerning network funding and the involvement (or not) of public institutions. Some of the key messages from the analysis are:

- Motivation of the involved stakeholders is important for the success of the network;
- *In situ* conservation should be advantageously coupled with *ex situ* conservation;
- Long-term support (including funding) of the networks is fundamental to guarantee their survival;
- Policy related to PGR conservation, access, equitable sharing of benefits and use are fundamental for network operation and longevity;
- National and regional legislation on access and benefit-sharing (ABS) must be carefully considered in the conceptualization of a network governance and operation structure.

2.1.2 Task 1.2 Knowledge of in situ *resources/sites (Months 1–20)*

Task leaders: UNIPG, URJC, UOB. Involved partners: NORDGEN, AARI, LUKE, BGPV, DIMITRA, ARCN, PSR, EUROSITE, UPV + FPAs

Two online surveys were prepared using the EUSurvey tool to gather information on CWR and LR conservation activities. This work was led by URJC and UNIPG respectively, with input from UOB and a number of other partners who reviewed and commented on survey drafts. The appropriate contact at the Secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture

(ITPGRFA)[5] responsible for the development of data standards to be applied in the Global Information System (GLIS) also reviewed and contributed to the development of the LR survey.

Landrace *in situ* resources/sites

The online survey was not published during the reporting period due to issues related to compliance with the General Data Protection Regulation (GDPR) (see section 2.1.4). An alternative means of collecting the required data was therefore implemented. An Excel template for *in situ* landraces data recording was prepared by UNIPG, which includes a minimum subset of the data fields from 'Descriptors for web-enabled national *in situ* landrace inventories' (Negri *et al*. 2014)[6]. The template was sent to project partners, FPAs and ECPGR National Coordinators in early April 2019 requesting contributions by mid-September 2019. Other information on *in situ* landraces will be retrieved from project partners' contributions to Deliverable 2.4 (LR population management and access guidelines). The collected information will be used to create a number of precisely located conservation sites as a backbone for the European Network.

In addition, UNIPG has carried out several activities on the identification of LR *in situ* resources and sites in Italy and is discussing with UOB the possibility of taking advantage of the European Search Catalogue for Plant Genetic Resources (EURISCO)[7] database to select a sample of sites from which *ex situ* accessions were collected, and investigate—with the help of the project collaborators—whether the resources still exist on-farm. LUKE has also carried out several activities on the identification of landrace *in situ* resources and sites in Finland.

CWR *in situ* resources/sites

The online CWR survey was launched on 03 December 2018 and will remain open until 30 June 2019. The initial survey was prepared in English and subsequently translated into eight other languages: Spanish (URJC), French (URJC), Turkish (AARI), German (ARCN), Dutch (EUROSITE), Croatian (EUROSITE), Swedish (FPA from the Swedish Board of Agriculture), and Greek (DIMITRA). The survey was intensively disseminated by all project partners and FPAs in order to reach the widest audience. Specialists from 31 countries across the globe were contacted from the environment conservation sector and the PGR conservation and breeding sectors. Inter alia, in Germany approximately 300 people were reached, while in Spain over 150 people were directly contacted. In addition, the survey was disseminated through two large mailing lists (AEET – Spanish Association of Terrestrial Ecology and SEBiCoP – Spanish Society of Plant Conservation Biology). Further, the survey was disseminated among the members of the IUCN SSC CWR Specialist Group (71 members from 38 countries) and the mailing list CWRSGroup (cwrsgroup@yahoogroups.com) which includes members worldwide, and among the members of ECPGR.

During the reporting period, 47 responses were received from Spain (20), Germany (8), Croatia (4), Czech Republic (3), United Kingdom (3), Sweden (1), New Zealand (1), Italy (1), Switzerland (1), Hungary (1), Lithuania (1), Ireland (1), Greece (1) and Turkey (1). An initial exploratory analysis of the data (152 records from 135 different taxa) reveals that at least 62 CWR taxa included in the list of

[5] www.fao.org/plant-treaty/en/

[6] **Negri, V., Maxted, N., Torricelli, R., Heinonen, M., Veteläinen, M. and Dias, S.** 2014. Descriptors for web-enabled national *in situ* landrace inventories. https://pgrsecure.bham.ac.uk/sites/default/files/documents/helpdesk/LRDESCRIPTORS_PGRSECURE.pdf

[7] http://eurisco.ecpgr.org

priority CWR taxa for Europe (+ Turkey) prepared by UOB in relation to Task 4.3, 'CWR network design', are being actively conserved in 70 sites in Europe.

Several meetings took place among URJC, UOB, BGPV and BIOVER to discuss the methodology and procedures for this task, as well as the activities of Task 4.3. As a result of these meetings, URJC has started downloading the occurrence data for the list priority CWR taxa for Europe (+ Turkey) prepared by UOB from the Global Biodiversity Information Facility (GBIF).

Also of note, Farmer's Pride partner DIMITRA is conducting research for the identification of *in situ* resources and sites from the Greek Genebanks' passport data of LR and CWR inventories (mainly from the latest collecting expeditions) and via communication with local communities and farmers, NGOs, protected area managers and directorates of ministries responsible for PGR conservation (at national and regional level).

2.1.3 Task 1.5 CWR network showcase (Months 24–33) *Task leader: URJC. Involved partners: UOB, BIOVER, NORDGEN, EUROSITE, AARI, DIMITRA, PLANTLIFE, UNIPG, BPGV*

URJC has elaborated an extensive list of potential CWR network showcases and organized them into different categories. These showcases have been assigned to the involved partners to provide information following a common structure.

Coordination with Dynaversity has taken place to avoid overlapping or duplication of activities, since both projects are gathering data for a range of network showcases. The complementary approaches for CWR network showcases (two cases for Dynaversity and 50 cases for Farmer's Pride) have been discussed by URJC and Institut Technique de l'Agriculture Biologique (ITAB). Dynaversity will focus on the initiatives themselves, identifying techniques/practices/situations which favour collaboration and networking, with the aim of strengthening networking at a European level, while Farmer Pride's will maintain more focus on genetic resources and their management to conserve them *in situ*. These very different and potentially complementary approaches will allow greater insight into the CWR network showcases. Discussions and conclusions are going to be shared between the two projects.

2.1.4 WP1: Deviations from Annex I

Task 1.1

The project Steering Committee decided to keep the stakeholder survey open beyond the originally intended period (to month 8) to maximize the opportunity to identify stakeholders from as wide a range of countries as possible. This has affected the submission date of Deliverable 1.1, 'Identify *in situ* stakeholders', but has not had any major impact on other tasks.

Task 1.2

- The launch of the LR survey has been delayed due to unresolved issues related to compliance with the GDPR. This could delay the achievement of Deliverable 1.2, 'Knowledge of *in situ* resources and sites'. However, it should not have impact on the subsequent work since the completion of the related task (4.2) is foreseen for month 33.
- URJC's contribution to D1.2 will be slightly delayed. Some valuable information is still expected from some partners—therefore, it was decided to keep the online CWR survey (see Task 2.1) open until June 30th 2019. This delay should not impact the completion of related Task 4.3 as this is foreseen for month 33.

2.2 WP2: Population management (WP leader: URJC)

2.2.1 Task 2.1 LR population management (Months 12–32) *Task leader: UNIPG. Involved partners: UOB, PSR, LUKE, BPGV, ARCN, DIMITRA + FPAs*

In order to prepare for Deliverable 2.4, 'LR population management and guidelines' (due in month 32), UNIPG has prepared a document in which examples of landrace *in situ* management are reported. Examples are provided for different crop models: out/inbreeding as well as garden/open field. The document has been circulated among all project partners asking them to contribute examples from their countries, and shared with the responsible person of the sister project Dynaversity.

This compilation of case studies will also be used to populate the 'best evidence practice database' related to Task 2.4, 'Informatic tools', Task 5.4, 'Best practice promotion and dissemination', as well as Deliverable 5.6, 'Publication of case studies, best practices and tool kits'.

2.2.2 Task 2.2 Community seedbank (CSB) management (Months 7–30) *Task leader: PSR. Involved partners: BIOVER, UPV, OMKI, AARI, BPGV, DSS, ARCN*

Four workshops were organized and executed during this period in the two countries selected as models for national seed networking: Denmark and Hungary. Participants were from diverse organizations (public and private) to represent all involved sectors. DSS and PSR co-organized and facilitated the workshops in Denmark. OMKI, the seed network Magház, PSR and ARCN co-organized and facilitated the workshops in Hungary.

Denmark workshop 1: 'Networks for Diversity Seeds in Denmark', 09 May 2018, Vipperød

Twenty-one participants attended the workshop representing the seed-savers organization Frøsamlerne (Danish Seed Savers – DSS), permaculture activists, breeders, horticulturists and researchers. A representative of UOB also attended to introduce the Farmer's Pride project. Participants discussed how to establish a national network and integrate their activities in a national strategy for the management of seed diversity. Although the seed-savers network Frøsamlerne is already well-established, two concrete actions were suggested to enhance it: 1) the establishment of a catalogue of conserved PGR; and 2) the distribution and commercialization of diversity seeds to make the network more self-sustainable and financially independent.

Denmark workshop 2: 02 April 2019, Copenhagen

Fifteen participants attended the workshop representing farmers, chefs, seed producers, seed-savers, the Danish Agriculture Agency and the public research community. The workshop focused on two topics: 1) alternative seed markets and access to PGR; and 2) a technical secretariat to enhance PGR. Participants identified and mapped the unique selling points (USP) of traditional cultivars and considered how to promote and market the products. The participants agreed to develop a proposal to seek funding to establish a technical PGR secretariat.

Hungary workshop 1: 'Multi-actor approach on PGR management in Hungary', 21 June 2018, Budapest

The participants (29 stakeholders: farmers, representatives of various NGOs, research institutes, universities, Ministry of Agriculture, National Food Chain Safety Office), worked together to visualize the challenges and opportunities that arise when building a network around *ex situ* and *in situ* PGR conservation. It was pointed out that an umbrella organization to assist small organizations is missing. This could be solved with a national seed network like Magház (Hungarian seed-savers). In the interactive part, several questions about agrobiodiversity management were discussed under the

question of 'how to develop agrobiodiversity from the field to the plate'. Results and challenges/weaknesses were analyzed regarding: 1) seed quality of farm-saved seeds/home-garden seed-savers; 2) consumer consciousness/awareness-raising; 3) lack of an organization to promote and organize networking; 4) lack of trust between different stakeholders; and 5) lack of human resources and funding. In order to move forward, participants defined concrete activities to reach their goals and improve their weak points. All participants committed to regular meetings to continue building this community. PSR and ARCN will continue to monitor and guide this process further.

Hungary workshop 2: 'Production and processing of landrace cereals', 08 February 2019, Vértesboglár

This workshop had the extra objective of exchanging experiences on the different fields of production and processing of old cereal landraces and to connect the farmers' activities with the seed-saving activities of the seed network Magház. Although the meeting was a big success in terms of promoting cultivation, processing and marketing of cereal genetic resources in Hungary, it was not yet possible to bring conservation activities of the seed network closer to the farmers' network activities connected to cereal production. A widespread lack of trust prevented the willingness to exchange seeds between these different stakeholders. It will take much more time to develop a common base on which seed exchange would become possible. The need to develop activities that strengthen the seed network structure and promote conservation management activities within the network was clear. Additional meetings are scheduled to work on the organizational structures, including one in September 2019 with PSR and ARCN.

2.2.3 Task 2.3 CWR population management (Months 6–30) *Task leader: URJC. Involved partners: UOB, EUROSITE, AARI, PLANTLIFE, DIMITRA, BIOVER, BPGV, UPV + FPAs*

URJC contacted the involved partners to elaborate a table of contents for the CWR population management guidelines. After some iterations and several drafts, a final version of the table of contents was agreed (Box 2) and the drafting has begun. Other potential contributors (such as FPAs) that could improve and complement these guidelines were identified and will be contacted once an initial draft of the guidelines has been prepared.

Discussions have taken place amongst the involved partners to determine the best format in which to publish the guidelines. Several proposals were made, ranging from easy to read dissemination sheets which contain schematic recommendations, to the preparation of a reference book, where the guidelines could be formulated in much greater detail. The involved partners decided to initially focus on producing a written technical report (guidelines) that may be easily used and understood by protected area managers and technicians. This will be published in the Farmer's Pride website.

The possibility of producing other formats of the guidelines was also considered. One suggestion was to follow a similar approach to the 'Interactive Toolkit for Crop Wild Relative Conservation Planning' (Magos Brehm *et al*. 2017)[8]. Further, EUROSITE is currently developing a management planning portal—a reference point for information on how to develop and implement a good management plan for a protected site aimed at EUROSITE members and the broader European protected site managers' community. EUROSITE has agreed to incorporate the CWR population management guidelines as a

[8] Ma**gos Brehm, J., Kell, S., Thormann, I., Gaisberger, H., Dulloo, E. and Maxted, N.** 2017. *Interactive Toolkit for Crop Wild Relative Conservation Planning Version 1.0.* University of Birmingham, Birmingham, UK and Bioversity International, Rome, Italy. www.cropwildrelatives.org/conservation-toolkit/

thematic module within this portal that will address how to integrate the conservation of CWR into an existing protected area management plan—an aspect that is currently missing and will help build synergies with the nature conservation sector.

Box 2. Simplified table of contents agreed for the CWR population management guidelines

1. Introduction
2. Design and implementation of the management plan
3. Integration of CWR genetic reserves in the management of protected areas
4. CWR management on public land outside protected areas
5. CWR management on private land/farmers
6. Management to address climate change
7. Linkage to *ex situ* collections
8. Conclusions
9. Acknowledgements
10. References

2.2.4 Task 2.4 Informatic tools (Months 10–30) *Task leaders: UOB, UNIPG. Involved partners: BIOVER, URJC, PSR, LUKE, IPK*

A dialogue was initiated to delineate the contents of the tools and assign responsibilities among the involved partners:

1. Landrace repatriation tool – WUR is developing a prototype and UOB is engaging a consultant to collect data to test the tool.
2. Landrace evidence-based database of LR management and LR added value examples – UOB is seeking collaboration with experts in this field to develop the tool and UNIPG are engaged in collecting data to test it. Twenty examples have already been collected by UNIPG and other examples are expected to be provided by project partners (see Task 2.1).
3. UOB has had extensive discussion with the designer and developer of the CAPFITOGEN Tools[9]—developed by the United Nations Food and Agriculture Organization (FAO) to aid PGR conservation planning— concerning: a) making the Tools available via a commercial web-server; b) completion of partially developed new tools to add to the CAPFITOGEN suite; and c) development and addition of new tools. The scope and price have been agreed and UOB is establishing the subcontract.

2.2.5 Task 2.5 Facilitating **in situ** *conserved diversity use (Months 10–33)* *Task leader: IPK. Involved partners: URJC, PSR, LUKE, DIMITRA, PLANTLIFE, ESA*

This task aims to prepare an extension of the EURISCO for *in situ* conserved PGR diversity.

After a brief evaluation of the current data situation and in agreement with UOB, it was concluded to omit the step of creating an inventory of data to be integrated due to the limited available data. The main focus was placed on the preparation of a proposal of data exchange formats for *in situ* CWR and on-farm LR data.

Various descriptor lists from previous projects of the *in situ* community were evaluated and proposals for easy-to-handle formats were compiled. Attention was paid to making sure that the proposed exchange formats reach a maximum compliance with the well-established Multi-crop Passport

[9] www.capfitogen.net/en/

Descriptors (MCPD)[10] format originally developed for *ex situ* material only. After multiple rounds of discussion with the involved partners, the proposal was circulated to all project partners for review in April 2019. After the incorporation of the received feedback, this proposal will be an important base for the development of a concept for the technical extension of EURISCO during the next reporting period.

2.2.6 Task 2.6 Integrated in situ *and* ex situ *conservation (Months 4–33)* *Task leader: WUR. Involved partners: UOB, NORDGEN, URJC, PSR, OMKI, LUKE, BPGV, DSS, ARCN, BIOVER, ESA, UPV*

WUR prepared a surface scan of the current situation regarding the integration of *in situ* and *ex situ* conservation. This short study was distributed amongst all partners involved for feedback. The analysis functions as a basis for the workshops subsequently held in Spain and in the Netherlands.

WUR held consultations with two important organizations in the Netherlands with the aim of strengthening the management of nature reserves for PGR conservation in the country: Staatsbosbeheer (SBB) (02 July 2018) and Natuurmonumenten (NM) (04 July 2018). The role that WUR has in mind for itself is the *ex situ* storage of population samples as safety back-ups and the mediation between the potential users of germplasm and SBB and NM. Both SBB and NM are open to the proposed idea, especially the safety back-up role. Awareness of the importance of the species as a genetic source for crop plants is still a deficit for the managers of SBB that needs to be solved. WUR can play a role in creating support and increasing knowledge about CWR within SBB and NM. Since then, WUR has been in regular contact with the large nature protection organizations (Staats Bos Beheer and Natuur Monumenten).

In Spain, stakeholders representing seed-savers networks, gene banks and protected areas were interviewed individually and two workshops were held—one related to CWR and the other to LR. At the annual meeting of seed-savers networks on 06 October 2018, three local organizations and a national organization were interviewed about coordination and collaboration with *ex situ* organizations. Later, information was sought from different genebanks (national and regional), and some direct meetings were held. Information was received from four national or subnational genebanks: IMIDRA, COMAV, Puente del Perdón (Madrid), and CITA. On 23 November 2018, a meeting was held with the national gene bank CRF. Different opinions and experiences in collaboration were gathered. Managers of several protected areas, as well as public administrations, were also contacted. Most of them indicated that they were not actively conserving any CWR. However, URJC explained that some of the threatened, rare or endemic species they are actively conserving are CWR. This indicates that there is a critical need for education and advocacy about PGR within the nature conservation community.

The workshop for CWR was held on 22 March 2019. It was attended by the URJC team and technical staff of the Department of Environment of the Navarra Autonomous Community; the Director of the La Caldera de Taburiente National Park; technical staff of the Minorca and Sierra del Rincón Biosphere Reserves; the genebank curator of the Canarian Botanical Garden 'Viera y Clavijo'; and researchers of the national genebank, CRF. All participants expressed their interest in conserving CWR in protected areas and improving the collaboration with genebanks, although the concept and importance of CWR was quite new for some of the participants. In this workshop new possibilities of *in situ–ex situ*

[10] www.bioversityinternational.org/e-library/publications/detail/faobioversity-multi-crop-passport-descriptors-v21-mcpd-v21/

coordination for CWR conservation arose. URJC offered and performed to interested participants the crossing of the lists of flora species with which they work (protected areas or genebanks) with the prioritized list of CWR in Spain (Rubio Teso *et al*., 2018[11]).

The workshop for LR was held on 28 March 2019, and attended by the URJC team and representatives of CRF (the national genebank), CITA and COMAV (regional genebanks), and Red de Semillas 'Resembrando e Intercambiando'—a farmers', consumers' and rural developers' association. Participants were all receptive to the idea of improving collaboration between on-farm and *ex situ* conservation. It was agreed that to carry on these joint efforts, extra human resources are needed. Collaboration proposals could be discussed in a recently created commission in the Ministry of Agriculture: Comisión Nacional de conservación y utilización de los Recursos Fitogenéticos para la Agricultura y la Alimentación (National Commission for the conservation and use of PGRFA).

In addition, a meeting was held on 26 November 2018 to promote, as a pilot study, collaboration between the Biosphere Reserve 'Sierra del Rincón' and the genebank of the Universidad Politécnica de Madrid (UPM) for the *ex situ–in situ* conservation of CWR. In this project, populations of 15 priority species of CWR will be searched in the Biosphere Reserve and characterized *in situ* to promote the implementation of one or more genetic reserves. Seeds from the same populations will also be collected and conserved at the UPM genebank. The project to promote this collaboration was officially approved on 26 April 2019.

In Finland, a network model towards a user genebank of heritage cereals has been planned by LUKE in cooperation with HAMK University of Applied Sciences. Until now, few farmers have been multiplying genebank materials in Finland. However, there is an increasing interest of growers to cultivate genebank material. In 2018, the 'multiplier network' had 17 members (farmers and gardeners) who started to multiply Finnish landrace seed material stored in NordGen (58 accessions). In 2019, 38 new members joined the network, multiplying 54 accessions. The network orders seeds annually from the genebank as a joint order. Half of the material (5–10 g) stays as backup seeds in the network storage and the other half is sent to the farmer. Farmers multiply the material for five years following instructions to produce enough seeds for cultivation. Regular discussions have been ongoing with national authorities (seed testing station, genetic resource programme, ministry of agriculture and NordGen) on the topic of user genebank, but also on organic heterogenic seeds.

2.3 WP3: Enabling conservation and use (WP leader: BIOVER)

2.3.1 Task 3.1: Incentives for conservation/use (Months 4–27) *Task leader: BIOVER. Involved partners: AARI, ARCN, DIMITRA, PLANTLIFE, UOB*

A survey protocol for assessing farmer opportunity costs for threatened variety cultivation and their willingness to participate in support schemes (existing or potential) has been developed. Following the initial farmer survey application focussed on 'Bere' barley in Scotland, the questionnaire has been further developed/adapted in collaboration with ARCN, DIMITRA and AARI for its application in Austria, Greece and Turkey with a focus on wheat landraces/traditional varieties. Piloting is underway in Austria and Greece, while progress in Turkey has been delayed (see section 4.1). In order to ensure a common crop focus in all the participating countries, the survey will also be applied to thatch wheat

[11] **Rubio Teso, M.L., Torres Lamas, E., Parra-Quijano, M., de la Rosa, L., Fajardo, J. and Iriondo, J.M.** 2018. National inventory and prioritization of crop wild relatives in Spain. *Genetic Resources and Crop Evolution* 65: 1237–1253.

landraces/traditional varieties in England. Two students, one from UOB and another from the Graduate Institute of Geneva, have been involved in the survey application and national partners have received training in sampling approaches, survey application and data capture. Survey translation into the national language and contracting of survey assistants has also be undertaken by the national partners. Additionally, a desk review questionnaire of current regulatory framework in each participating country has been developed and distributed to the national partners for completion over coming months.

2.3.2 Task 3.2: Identify useful in situ *traits (Months 4–34)* *Task leaders: UNIPG, URJC. Involved partners: AARI, BIOVER, ESA, EUROSITE, PLANTLIFE, PSR, UOB, UPV*

A pilot survey related to the identification of useful traits *in situ* was elaborated by UNIPG and circulated during the open day organized by UNIPG under Task 5.4. Subsequently, results from the pilot survey fed a more comprehensive survey that was developed by URJC in collaboration with UNIPG and UOB using the EUSurvey tool. The survey was launched on 03 December 2018 and closed on 31 May 2019. It was prepared in English and translated into seven other languages: Spanish, French, Turkish, German, Dutch, Croatian and Swedish. The survey was disseminated by all partners and FPAs. By the end of the reporting period, 60 responses had been received, corresponding to 61 crops and 1422 records of traits. Wheat was by far the crop that received more answers, followed by tomato, bean, apple and potato. Tolerance or resistance to biotic stress was the group of traits that was most demanded.

2.3.3 Task 3.3: Enhance use of in situ *conserved PGR (Months 4–34)* *Task leaders: WUR, ESA Involved partners: AARI, LUKE, PSR, OMKI*

An initial analysis of the issues related to the enhancement of the use of *in situ* material was made, inventorying the factors hindering use at present and proposing approaches to alleviate these factors. The analysis was circulated amongst the partners involved in the task, their feedback was incorporated, and the report was presented and discussed at Farmer's Pride Workshop 1 in Denmark, October 2018.

Based on this analysis, the first steps to enhance the access and use of PGR conserved *in situ* were taken in the Netherlands and Turkey.

Bilateral meetings were held with two major nature protection organizations in The Netherlands: Staats Bos Beheer and Natuur Monumenten. Issues related to Task 3.3 (and 2.6) were discussed, specifically, the willingness of those organizations to make material available to (commercial) users. A second round of meetings is being planned. While discussions were positive, it is clear they have never previously thought about the possibility that commercial users could be interested in wild plants growing in their territory, nor about ways to grant that access.

Since lack of information about PGR managed *in situ* is a major obstacle hindering their use, a demonstration website was developed to give an overview of the available PGR in nature (CWR) and on-farm (LR) in the Netherlands and Turkey. A start has been made to populate this website (temporary URL: https://projects.cgn.wur.nl/farmerspride/default.htm).

2.3.4 Task 3.4 Public willingness to fund PGR maintenance (Months 4–27) *Task leader: BIOVER. Involved partners: AARI, ARCN, DIMITRA, OMKI, PLANTLIFE, PSR, UOB*

A survey protocol for assessing willingness to pay (WTP) by members of the public for agrobiodiverse-related goods and services has been developed. Following an initial survey focussed on 'Bere' barley in Scotland, the questionnaire has been further developed/adapted in collaboration with ARCN, DIMITRA, OMKI, PSR and AARI for its application with a focus on wheat landraces/traditional varieties in Austria, Hungary, Switzerland and Turkey. Testing/piloting is underway in Austria, Hungary, Greece and Switzerland, while progress in Turkey has been delayed (see section 4.1). In order to ensure a common crop focus in all the participating countries, the survey will also be applied with a focus on thatch wheat landraces/traditional varieties in England. Two students, one from UOB and another from the Graduate Institute of Geneva, have been involved in the survey application and national partners have received training in sampling approaches, survey application and data capture. Survey translation into the national language and contracting of survey assistants has also been undertaken by the national partners.

2.3.5 Task 3.5 Policy dialogues (Months 4–36) *Task leader: BIOVER. Involved partners: UOB, ESA, WUR, UNIPG*

The first project policy brief was prepared and circulated to all project partners for comments. After several iterations, a final version entitled 'Building a collaborative network for on-site conservation of Europe's plant genetic resources for food and agriculture' was finalized and is now in production. The policy brief is aimed at key policy-makers and high-level stakeholders, particularly in the agricultural sector responsible for facilitating the conservation and sustainable use of LR, and the environment sector regarding the conservation and sustainable use of CWR. It is a call for action to policy-makers and proposes a number of solutions that need to be implemented to address the key problems affecting agricultural plant diversity and the policy actions required to establish and sustain the new network for agricultural plant diversity in Europe.

Other policy dialogue activities are reported under Task 5.5, 'Targeted advocacy'.

2.4 WP4: Network design and implementation (WP leader: UOB)

2.4.1 Task 4.1: Integrated network structures (Months 1–18) *Task leader: UOB. Involved partners: BIOVER, UNIPG, UPV, URJC, EUROSITE, OMKI, AARI, BPGV, DIMITRA, ESA, PLANTLIFE + FPAs*

Task 4.1 builds on previous work undertaken in the context of the EU-funded PGR Secure project[12] and the development of a concept for *in situ* conservation of CWR in Europe[13], as well as in the context of ongoing discussions with FAO regarding the development of a global network for *in situ* PGR conservation. The long-term vision is a global network of sites/populations which permanently conserves the genetic diversity of CWR and LR. However, the global network will be constructed region by region, with the European region providing the initial testing ground for concepts and practical application that can then be transferred to other regions in due course.

[12] www.pgrsecure.org

[13] **Maxted, N., Avagyan, A. Frese, L., Iriondo, J.M., Magos Brehm, J., Singer, A. and Kell, S.P.** 2015. *ECPGR Concept for in situ conservation of crop wild relatives in Europe*. Wild Species Conservation in Genetic Reserves Working Group, European Cooperative Programme for Plant Genetic Resources, Rome, Italy. www.ecpgr.cgiar.org/fileadmin/templates/ecpgr.org/upload/WG_UPLOADS_PHASE_IX/WILD_SPECIES/Concept_for_in_situ_conservation_of_CWR_in_Europe.pdf

The task focuses on discussing and agreeing the structures for establishing an integrated national/European *in situ* conservation/sustainable use network, with recommendations for practical implementation via the Integrated European/National PGR Conservation and Use Network. A discussion document entitled 'Proposal for Establishment of the European PGR *in situ* Conservation and Use Network' has been developed and discussed by a consortium focus group. Based on the initial feedback, the document has been revised and recirculated, and following this second round of input, will be circulated to all consortium partners, FPAs and key external stakeholders before publication in the Farmer's Pride website to obtain maximum feedback and endorsement. Once revised on the basis of this broader feedback, the final version of the document will provide the model for Network implementation in the second half of the project.

2.4.2 Task 4.2: LR network design (Months 7–33) *Task leader: UNIPG. Involved partners: PSR, OMKI, LUKE, BPGV + FPAs*

Work on Task 4.2 will be mainly based on the outcomes of tasks undertaken in WPs 1–3. However, UNIPG has prepared a discussion paper regarding some of the key aspects of the future *in situ* network. The document, mainly focused on landrace materials, addresses the following aspects: network design, network subscription, governance structure, funding, functionality, minimum standards required for landrace inclusion in the network, landrace nomination and inclusion in the network (top-down and bottom-up approaches), and access to materials within the network. Also of relevance, UNIPG has recently published a methodological approach to identify agro-biodiversity hotspots which will inform the LR network design[14].

2.4.3 Task 4.3: CWR network design (Months 7–33) *Task leader: URJC. Involved partners: UOB, BIOVER, NORDGEN, EUROSITE, PLANTLIFE + FPAs*

Extensive discussions between URJC and UOB have taken place regarding a strategy for undertaking this task. Based on methodologies and previous iterations of an inventory of priority CWR of Europe published by Kell *et al*. (2012, 2016, 2017)[15], a revised list of regional priority CWR taxa has been prepared that includes CWR of both human and animal foods, a broader range of human food crops, and wild taxa introduced to the region (as well as native taxa). Occurrence data for these taxa is being collated by URJC, and with the involvement of BIOVER and BPGV, the data will be processed to remove duplicate records and records of high uncertainty in terms of localities. Measures will also be taken to exclude cultivated populations of species that occur both in their wild form and are cultivated. The cleaned data will then be analysed using Geographical Information System (GIS) software to identify diversity hotspots, complementary locations in which the maximum infra- and intra-specific diversity can be conserved, and to undertake *in situ* gap analysis using protected area data. The analyses will also involve the preparation of species distribution and climate change models to help predict

[14] **Pacicco, L., Bodesmo, M., Torricelli, R. and Negri, V**. 2018. A methodological approach to identify agro-biodiversity hotspots for priority *in situ* conservation of plant genetic resources. *PLoS ONE* 13(6): e0197709. https://doi.org/10.1371/journal.pone.0197709

[15] **Kell, S.P., Maxted, N. and Bilz, M.** 2012. European crop wild relative threat assessment: knowledge gained and lessons learnt. In: Maxted, N., Dulloo, M.E., Ford-Lloyd, B.V., Frese, L., Iriondo, J.M. and Pinheiro de Carvalho, M.A.A. (eds.) *Agrobiodiversity Conservation: Securing the Diversity of Crop Wild Relatives and Landraces*. CAB International, Wallingford. Pp. 218–242; **Kell, S., Ford-Lloyd, B.V. and Maxted, N.** 2016. Europe's crop wild relative diversity: from conservation planning to conservation action. In: Maxted, N., Ford-Lloyd, B.V. and Dulloo, M.E. (eds.), *Enhancing Crop Genepool Use: Capturing Wild Relative and Landrace Diversity for Crop Improvement*. CAB International, Wallingford, UK. Pp. 125–136; **Kell, S.P., Ford-Lloyd, B.V., Magos Brehm, J., Iriondo, J.M. and Maxted, N.** 2017. Broadening the base, narrowing the task: prioritizing crop wild relative taxa for conservation action. *Crop Science* 57: 1042–1058. DOI: 10.2135/cropsci2016.10.0873.

localities for long-term conservation. A complementary *ex situ* gap analysis will also be undertaken for the priority taxa.

2.5 WP5: Dissemination (WP leader: PLANTLIFE)

2.5.1 Tasks 5.1 and 5.2 Communications and media strategies (Months 1–36) *Task leader: PLANTLIFE. Involved partners: All*

Following discussion at the kick-off meeting in month 2, the consortium members were surveyed for their input into the communications and media strategies in months 5 and 6. An outline of the strategies was also circulated for comments and the final versions were submitted in month 12. Communication and dissemination activities during the reporting period include:

- In month 7, a communications plan was circulated to the consortium to support the launch of the project website and stakeholder survey. This plan included specific objectives, timings, audiences, suggested activities, key messages and Tweets. Details of the dissemination activities are given under the report for WP1, Task 1.1.

- In month 8, guidance on communications and branding was circulated to the consortium to ensure proper and consistent use of the project logo and the EU emblem, and to coordinate the production of publications.

- In month 13, a calendar of events was created to enable all partners to share information about project activities and non-project events. This is regularly updated and available in the project's online data share folder.

- In month 15, a Twitter account was established (@PGRInSitu) which is being used successfully to promote the project, disseminate outputs and engage stakeholders. The account has a generic name to allow its continued use beyond the project duration.

- In month 15, a general project factsheet was published and widely disseminated. This is available on the project website in six languages and printed copies are available in English.

A number of presentations on the Farmer's Pride project have been given at conferences and other stakeholder events. These include:

- UNIPG presentation at the conference 'Biodiversità 2018 XII Convegno Nazionale: Biodiversità; Ambienti Salute' (Italy, June 2018).

- UOB presentation at the Eurosite & CEEweb for Biodiversity combined Annual Meeting, (Hungary, September 2018).

- UOB presentation at the Conference of the Global Partnership for Plant Conservation (South Africa, August 2018).

- UOB presentation at the 62nd SIGA Annual Congress, 'Plant development and crop productivity for sustainable agriculture' (Italy, September 2018).

- UOB presentation at the 2nd Mediterranean Plant Conservation Week, 'Conservation of Mediterranean Plant Diversity: Complementary Approaches and New Perspectives' (Malta, November 2018).

- UPV presentation to Valencian tomato landrace farmers (April 2019), in collaboration with BRESOV Horizon 2020 project: www.bresov.eu/news/bresov-meets-farmers.

In line with the numbers of activities outlined in the Project Continuous Report via Grant Management Services (GMS), more detail on the dissemination and communication activities, and estimated numbers of people reached during the reporting period are shown in Table 1.

2.5.2 Task 5.3 Project website (Months 4–36) *Task leader: UOB. Involved partner: BIOVER*

The Farmer's Pride project website (farmerspride.eu) went live in month 6 and was formally launched through the consortium's networks during the week beginning 30 April 2018.

In addition to the 'Home' page, the site currently comprises the pages 'Context', 'Actions', 'Collaborators', 'Publications' and 'Contacts'. The collaborators page lists the project partners, members of the External Advisory Board and FPAs, as well as providing a link to the Dynaversity project.

Further content will be added to the site as the project progresses, including an events page, Twitter feed, search form, and pages dedicated to the final dissemination conference.

The Farmer's Pride website is hosted by the Project Coordinator, UOB. The initial site and its content were created by the Farmer's Pride Project Manager who will provide website management throughout the project lifetime. PLANTLIFE provided comments and advice on the draft site. The site has also been reviewed by communications experts at partner organizations EUROSITE and BIOVER.

2.5.3 Task 5.4 Best practice promotion and dissemination (Months 13–36) *Task leader: UNIPG. Involved partners: PLANTLIFE, PSR, BIOVER + FPAs*

On 15 May 2018, UNIPG organized an open day on 'Diversity use in breeding and sustainable agriculture' at the Department's experimental field (Sant'Andrea d'Agliano). Farmers, farmer organizations, breeders, students and other stakeholders were directly contacted by UNIPG and invited to the event.

In 2018 and 2019, four workshops were held in Denmark and Hungary (two in each country) to develop models for national seed networking (see Task 2.2 for more detail).

URJC held a meeting on 26 November 2018 to promote, as a pilot study, collaboration between the Biosphere Reserve 'Sierra del Rincón' and the genebank of the Universidad Politécnica de Madrid (UPM) for the *in situ–ex situ* conservation of CWR. It was attended by environmental agents, environmental educators, farmers, staff from the department of environment of the Madrid Region and staff from the Institute of Rural Development of Madrid (IMIDRA) (see Task 2.6 for more detail).

Table 1. Dissemination and communication activities, and estimated numbers of people reached during the reporting period

Dissemination and communication activities		
Item	**Number**	**Description**
Organization of a workshop	7	First project workshop in Denmark (Task 5.7) Two workshops in Denmark and two in Hungary to develop models for national seed networking (Task 2.2) Two workshops in Spain on integrating *in situ* and *ex situ* conservation (Task 2.6)
Popularized publication	2	*Landraces* newsletter Issue 4 (Task 5.6) ÖMKI Hungary workshop summary
Flyer	1	General project factsheet
Social media	39	Tweets from project Twitter account
Website	2	Project website www.farmerspride.eu WUR website on access to *in situ* PGR https://projects.cgn.wur.nl/farmerspride/default.htm (Task 3.3)
Participation to a conference	10	Several partners have participated in relevant conferences and some have given oral or poster presentations
Participation to a workshop	15	Several partners have participated in workshops relevant to the project
Participation to an event other than a conference or a workshop	2	Organization and participation at farmers' open days
Participation in activities organized jointly with other EU project(s)	3	Participation in Dynaversity annual project meetings Participation in GenRes Bridge kick-off meeting
Estimated number of people reached through dissemination and communications activities		
Sector	**Number**	**Description**
Scientific community	2000	Through conference participation, workshops and publication of papers
Industry	150	Seed and plant breeding companies through Euroseeds, members of the External Advisory Board and Farmer's Pride Ambassadors
Civil society	800	Through workshops, social media, meetings and conferences
General public	5000	Through social media
Policymakers	100	Through national and European meetings, conferences, publications and social media
Media	50	Through social media and national activities
Other	250	Farmers' associations and unions, community seed banks and others, through project workshops, social media and participation at conferences and workshops

2.5.4 Task 5.5 Targeted advocacy (Months 13–36) *Task leader: BIOVER. Involved partner: PLANTLIFE, PSR, UNIPG*

Bioversity has led the production of a policy brief (see Task 3.5), which forms the basis of targeted advocacy. A task force is being established to identify key policy-makers in Europe with whom Farmer's Pride should be engaging. Individuals of the project consortium and FPAs have been invited to be part of the task force to engage in policy dialogues. Advocacy plans for specific stakeholder groups will be developed to ensure uptake of the project outputs.

Targeted advocacy activities have been carried out throughout the reporting period at regional, national and European levels. Many of the communication and dissemination activities referred to in this report (including partners' attendance at meetings, workshops and conferences) serve as channels for advocacy with our key stakeholder groups. The FPAs and project partners are also promoting the project and making the case for the new European Network for *in situ* PGR conservation and sustainable use among their networks and with government departments and statutory agencies.

A specific example of one such targeted advocacy meeting was organized by UOB. In December 2018, UOB and EUROSITE met the Head of the Nature Protection Unit in the EC Directorate General (DG) Environment Dir D – Natural Capital, concerning the potential for CWR conservation within the Natura 2000 network. Topics for discussion included the detailed mapping of potential Natura 2000 sites rich in CWR diversity and the correlation between Habitats Directive listed habitats and species, and CWR, on which further analysis will be produced as part of the Farmer's Pride project. This was a key opportunity to develop our engagement with DG Environment and this will be followed up with further advocacy in the next period.

In Spain, URJC participated in a joint meeting with the Spanish Ministry for Ecological Transition and the Spanish Ministry of Agriculture. This was an opportunity to inform them about the activities on conservation of CWR in the context of the Farmer's Pride project and to present them the initiative to establish a European network of CWR genetic reserves.

2.5.5 Task 5.6 Project newsletters and publications (Months 12–36) *Task leader: UOB. Involved partner: UNIPG*

In collaboration with UOB and PLANTLIFE, UNIPG published Issue 4 of *Landraces* in early 2019. Previous issues were published in the context of the EU-funded project, PGR Secure[16]. The publication, freely downloadable from the project website, includes a brief presentation of the project and a collection of nine examples of landrace conservation activities throughout Europe, including two articles from project partners as listed in the Project Continuous Report. The newsletter has been disseminated by the project collaborators and on Twitter.

UOB is collecting papers from the project partners and wider PGR community for the preparation of a new issue of *Crop wild relative*.

In June 2018, UNIPG published a scientific paper focused on the development of a method for the identification of PGRFA hotspots[17].

[16] www.pgrsecure.org

[17] **Pacicco, L., Bodesmo, M., Torricelli, R. and Negri, V.** 2018. A methodological approach to identify agro-biodiversity hotspots for priority *in situ* conservation of plant genetic resources. *PLoS ONE* 13(6): e0197709. 10.1371/journal.pone.0197709

Other publications prepared by project partners are listed in the Project Continuous Report via Grant Management Services (GMS) and are summarized below:

- Scientific papers in the publications *Almaig*, *Conservación Vegetal*, *Crop and Pasture Science* and *Book of Abstracts of the 17th Conference of the Hellenic Scientific Society of Plant Breeding*
- General project leaflet
- ÖMKI (Hungarian Research Institute of Organic Agriculture) workshop summary *Quality Bread for Everyone!*

2.5.6 Task 5.7 Project workshops (Months 2–36) *Task leader: PLANTLIFE. Involved partners: All + FPAs*

The first project workshop took place in Denmark on 23 and 24 October 2018 (month 12), organized jointly by PLANTLIFE and UOB, with support from local host DSS. The workshop was held in association with a meeting of the project 'Wild genetic resources – a tool to meet climate change' (Nordic CWR project[18]) to benefit from: a) lessons learnt in the Nordic region on planning and creating a PGR conservation network; b) the opportunity to discuss how the Nordic CWR sites/populations could be integrated within the wider European Network; and c) the involvement of the stakeholders in the Nordic region in helping to meet the objectives of the workshop.

The workshop involved 56 participants and comprised representatives of the Farmer's Pride project consortium and EAB, FPAs, national, regional and international policy-makers, representatives of the Dynaversity project and other invited specialists and experts. The workshop report has been circulated to participants and is available in the project website.

The second project workshop is scheduled to take place on the island of Santorini, Greece, 8–10 October 2019. An organizing committee has been formed comprising representatives from three project partners: DIMITRA as the local host, PLANTLIFE, and UOB. Two Skype meetings of work package and task leaders are scheduled for mid-June to plan the workshop programme and background documents.

2.5.7 Task 5.8 Dissemination conference (Months 34–36) *Task leader: PLANTLIFE. Involved partners: All +FPAs*

Planning has begun for the final dissemination conference, incorporating a policy dialogue workshop (Deliverable 3.6) and the third stakeholder workshop (Deliverable 5.1), to be held in Portugal in October 2020. The conference will be organized in association with ECPGR and the European Association for Research on Plant Breeding (EUCARPIA) Genetic Resources section to extend its reach.

An organizing committee has been formed, led by PLANTLIFE with representatives from the local project partner BPGV and UOB. The committee is working to secure a suitable venue to accommodate around 200 participants. The date, venue and title of the conference will be announced in July 2019. A programme committee, led by UOB, is also being formed to develop the content of the conference programme. This committee will consist of a core steering group of project partners and a wider advisory group including project partners, FPAs, EAB members and representatives of ECPGR and the EUCARPIA Genetic Resources section.

[18] www.nordgen.org/en/plants/projects/wild-genetic-resources/

2.5.8 WP5: Deviations from Annex I

Submitting the Farmer's Pride communications and media strategies was delayed due to staff time constraints, but this had no noteworthy impact on other tasks. Production of the advocacy plans has been delayed due to the delay in finalizing the introductory policy brief, but this task is underway and the delay will be minimal, with no impact on other tasks or the project as a whole.

2.6 WP6: Project management (WP leader: UOB)

2.6.1 Task 6.1 Work package and risk management (Months 1–36) Task leader: UOB. Involved partners: UNIPG, URJC, BIOVER, PLANTLIFE

The Steering Committee (SC) and 'extended SC' (involving both WP and task leaders) has held a number of online meetings via Skype to discuss coordination within and across WPs and to plan the Workshop 1 programme (see Task 5.7). *Ad hoc* bi/trilateral meetings between project partners are also taking place on a regular basis. The Consortium Committee (CC) convened at the kick-off and first annual consortium meetings to discuss and review project progress (see Task 6.3).

The state of play regarding critical risks is reported in the Project Continuous Report via GMS. One additional risk was identified during the period. None of the risks have materialized.

2.6.2 Task 6.2 Reporting and overall project management (Months 1–36) Task leader: UOB. Involved partners: All

The Project Manager (PM) has been responsible for general day-to-day project coordination and management, including reporting, dealing with policy and legal issues, liaison with partners and associated organizations, and general correspondence.

Reporting guidelines were prepared and circulated to the project partners in July 2018 detailing the requirements of, and due dates for the interim internal project reports and the periodic reports to the EC. The document was updated to provide detailed guidance on use of the EC's online reporting systems, in preparation for the first periodic report.

An interim internal report to month 9 was prepared to monitor progress, provide input to the first annual consortium meeting, and to provide a basis for the first periodic report.

Thirty-two individuals were invited to join the project in the capacity of Farmer's Pride Ambassador (FPA) to extend the stakeholder and geographic reach of the project. The project currently has 20 FPAs who are contributing to the development of the European Network, both in terms of contributing ideas and by promoting the actions of the project. In particular, through their participation in the project workshops, they are making an important contribution to the establishment of the Network with their specialist knowledge. The contribution of their organizations is acknowledged in the project website and their personal knowledge contributions are acknowledged in meeting reports and other publications, as applicable. FPAs have signed a Memorandum of Understanding with the Project Coordinator to acknowledge their role and to provide clarity regarding arrangements for funding their participation. The document, 'Introduction for Farmer's Pride Ambassadors' provides an overview of the project, the anticipated role of FPAs, the main project contact details, and arrangements for payment of travel and subsistence costs.

2.6.3 Task 6.3 Project evaluation (Months 1–36) *Task leader: UOB. Involved partners: All*

The Farmer's Pride kick-off meeting was convened at in Ancona, Italy, on 12 and 13 December 2017. Organized by the UNIPG and UOB, the meeting was attended by 25 participants representing the partner institutes, a member of the project's EAB and a representative of the Dynaversity project. It brought all the project partners together for the first time to: review the project aim, objectives and work plan, and carry out any fine-tuning required; discuss linkages between work packages and tasks, liaison between work package and task leaders, and confirm roles and responsibilities; review internal project management mechanisms and reporting requirements; and draft the project dissemination/capacity building strategy. It was also an opportunity to reflect on the project in the broader context of PGRFA conservation, management and use in Europe, and to discuss parallel and future actions required to ensure that the infrastructures developed during the action are permanently embedded and taken forward beyond the lifetime of the project. Potential synergies with the project 'Dynaversity' were also discussed.

After the opening session of the meeting, the context of Farmer's Pride was outlined and an overview of the project work plan presented. The work package (WP) and task leaders provided overviews of their WPs and tasks, detailing the aims, objectives and activities. Each presentation was followed by a plenary discussion which enabled any issues to be resolved and suggestions to be made regarding fine-tuning of the work plan. In the final sessions, issues of project management, finance, reporting and ethics were reviewed and discussed, potential synergies between Farmer's Pride and Dynaversity were addressed, the post-project continuation strategy was initiated, feedback was provided by a representative of the project's EAB, and any outstanding issues were discussed.

A report of the meeting (Deliverable 6.2) was submitted to the EC in month 5 and is available online in the project's data share folder.

The Farmer's Pride first annual consortium meeting was convened in Helsingør, Denmark on 25 October 2018, the day after Workshop 1 which took place in the same venue on 23 and 24 October. The meeting was attended by 28 participants representing the partner institutes (including WP leaders, task leaders and researchers), two members of the EAB (including the EAB Chair), and a representative of the Farmer's Pride sister project, Dynaversity. It brought all the participants together for the second time since the beginning of the project to discuss progress in WPs 1–5, project management issues, including operational procedures within the project, the post-project continuation strategy and coordination with the Dynaversity project. Lessons learned from the organization and proceedings of Workshop 1 were also discussed.

The meeting comprised a series of presentations giving updates on progress in the WPs and tasks, as well as on the Dynaversity project, each followed by a discussion session which provided an opportunity for participants to ask questions about the work and discuss and resolve any issues arising. In a separate session, the post-project continuation strategy was reviewed and finally, in a dedicated session, feedback on project progress was provided by two members of the EAB and the issues arising were deliberated.

The production of the first interim internal report to month 9 was an important vehicle for evaluating progress in the project. The report supplemented the presentations and discussions that took place at the first annual consortium meeting on 25th October 2018 at which the chair and one other member of the EAB were present to assist in the review of progress in the project.

2.6.4 Task 6.4 Intra-project communication (Months 1–36) *Task leader: UOB. Involved partners: All*

The project partners are in regular communication with the PM, primarily via email, which enables the Coordinator (UOB) to have an overall view of the project and how it is progressing. In the initial months of the project, the process of copying the PM in all relevant correspondence allowed some teething issues regarding inclusion of the relevant task partners to be ironed out. The PM has regularly liaised with the EC Project Officer and Financial Officer on matters related to the Grant Agreement.

A dedicated secure online repository for project documents was set up by the PM using UOB's BEAR Datashare platform. All project partners and staff have access to a range of documents related to WP6, including an updated list of project contacts, the contract documents, reporting guidelines and templates, deliverables and milestones, and agendas and reports of consortium meetings. Separate folders were set up for use by WP and task leaders, as well as for documents related to Workshop 1 for external users to access via a shared link.

2.6.5 Task 6.5 Ethical research (Months 1–36) *Task leader: UOB. Involved partners: All*

UOB prepared the project's Ethical Research Plan (Deliverable 6.1) which was reviewed and commented on by the project partners. Assistance on matters related to data protection was provided by UOB's legal office. All ethics deliverables (7.1, 'Informed consent procedures', 7.2, 'Data Protection Officer opinion' and 7.3, 'Ethical standards') have been addressed as stated in the deliverable documents.

2.6.6 Coordination with Dynaversity

The two projects, Farmers' Pride and Dynaversity were selected for funding under the Horizon 2020 Sustainable Food Security call, topic SFS-04-2017 'New partnerships and tools to enhance European capacities for in-situ conservation'. Considering the similarity in goals, activities and expected outcomes, as well as synergies/complementarity in proposed approaches, a coordination clause between the two consortia was included in the DoA Part B to commit both projects to aim at maximizing efficiency and impact to the benefit of the European stakeholder community, by favouring synergies and avoiding overlapping or duplication of activities. To this end, Farmer's Pride and Dynaversity have had reciprocal representation at the kick-off and first annual consortium meetings and Farmer's Pride Workshop 1, and convened a special coordination meeting in February 2018.

The Farmer's Pride/Dynaversity coordination meeting was organized by UOB and held at facilities provided by BIOVER in Maccarese, Italy, on 28 February 2018, with some participants joining by Skype. The meeting was attended by the respective project coordinators, UOB and Arcadia International, as well as Farmer's Pride WP and task leaders UNIPG, PSR, PLANTLIFE and BIOVER, and Dynaversity partners Rete Semi Rurale and INRA (French National Institute for Agricultural Research). The main related tasks and deliverables were reviewed, coordination actions, roles and responsibilities, and timelines agreed. The outcomes were translated into a Farmer's Pride/Dynaversity roadmap by UOB, agreed by the meeting participants and circulated to the Farmer's Pride project partners.

Regarding other project meetings, from Farmer's Pride, the UOB Project Coordinator attended the Dynaversity kick-off meeting and the PM attended the Dynaversity first annual meeting. From Dynaversity, partner Rete Semi Rurale attended the Farmer's Pride kick-off meeting and Workshop 1, and partner INRA attended Workshop 1 and the first annual consortium meeting. Presentations on the two projects were given at the respective consortium meetings. During the Dynaversity annual

meeting held in Budapest, January 2019, the Farmer's Pride PM identified potential areas where coordination between task leaders of the two projects could lead to greater benefits of the outcomes of the two projects (e.g., by coordinating joint products or products which address different aspects or stakeholder groups). Following the meeting, and in liaison with the Dynaversity Project Coordinator, on 22 March 2018, the Farmer's Pride PM sent a communication to the relevant partners from both projects requesting that they make contact with one another to: a) gain a clear understanding of the work being undertaken: aims, objectives, methods, intended outputs, means of dissemination and policy implications; b) discuss and agree how to move forward to: avoid any duplication of effort, avoid contacting the same actors with two different requests, avoid producing outputs with conflicting messages (especially with regard to policy recommendations), and maximize the impacts of the two projects; and c) inform the project coordination teams of the outcomes of their discussions. Following this, the project partners communicated by email, keeping the project coordination teams in copy.

The general outcome appears to be that the two projects are addressing the call in quite different ways. Farmer's Pride is establishing a new network of stakeholders and sites/populations (building on and strengthening existing structures), while Dynaversity is seeking ways of enhancing and sustaining existing networks. Further, both CWR and LR are the focus of the Farmer's Pride project and specific actions are being implemented for their conservation and sustainable use. In addition, while the Dynaversity focus is more on the social aspects of grower networks and diversification of PGR in the field, the Farmer's Pride project is more concerned with conservation of landrace/farmers' varieties that are adapted to unique local environmental conditions and farmers' (and other types of growers') needs. Nonetheless, as the two projects move into the final year, continued communication will be important to maintain the good coordination and ensure the synergy of outcomes.

2.6.7 WP6: Deviations from Annex I

Signature of the project Consortium Agreement has been delayed due to the complexity of the consortium in terms of the number of partners and legal issues regarding data sharing in the context of the GDPR. Deliverables 6.1, 'Ethical research plan' was delayed due to the time taken to seek appropriate advice on the required content, since there is no template or guidance provided by the EC. Deliverables 6.2, 'Kick-off meeting report', 6.3, 'Data management plan', 6.4, '1st annual consortium meeting report', and Deliverables 7.1–7.3, collectively 'ethical issues', were delayed due to staff time constraints and the necessity to prioritize actions. The late submission of these deliverables has not impacted on progress with the project actions.

3.0 Impacts, and exploitation and dissemination of results

The consortium does not anticipate any changes to the information in section 2.1 of the DoA regarding expected impacts. However, this will be reviewed in detail as part of the mid-term project review, along with the plan for exploitation and dissemination of results.

4.0 Deviations from Annexes 1 and 2

4.1 Tasks

There have been no significant deviations from Annex 1, however, the submission of a number of deliverables and achievement of some milestones has been delayed due to: a) decisions taken to extend survey periods; b) complex issues related to the GDPR requiring the involvement of beneficiary

legal teams; and c) staff time constraints. These delays have not caused any significant impact on other tasks.

Surveys planned under Tasks 3.1 and 3.4 in Turkey have been delayed due to some internal institutional issues (partner 11, AARI).

4.2 Use of resources

The person-months (PMs) planned for the project duration, actual PMs used in the reporting period, and remaining PMs per WP and per partner are shown in Table 2. A number of partners have used less PMs than might be expected for the reporting period. The consortium will review this with a view to possible PMs transfers between partners.

Estimated eligible costs per partner for the project, actual expenditure in the reporting period, and remaining estimated eligible costs are shown in Table 3. A number of partners have a high percentage of remaining eligible costs. The consortium will review this with a view to possible cost transfers between partners.

Table 2. PMs planned (grey shaded), actual (no shading) and remaining (black) per WP and per partner. Partner totals highlighted in red are those that have used 36% or less PMs during the reporting period. Total PMs for the project are highlighted in green.

Partner	1 UOB	2 BIOVER	3 UNIPG	4 NORDGEN	5 URJC	6 PSR	7 WUR	8 EUROSITE	9 OMKI	10 IPK	11 AARI	12 LUKE	13 INIAV	14 DIMITRA	15 DSS	16 ARCN	17 UPV	18 PLANTLIFE	19 ESA	WP totals
WP 1	2.40	0.60	20.90	1.20	9.70	1.00	0.10	2.10	1.30	0.20	8.00	7.00	13.00	6.80	0.60	1.50	2.40	0.40	0.20	**79.40**
	1.51	0.12	4.21	0.32	8.32	0.46	0.17	1.07	1.20	0.20	3.88	1.75	3.00	2.60	0.16	0.27	2.69	0.20	0.20	**32.33**
	0.89	0.48	16.69	0.88	1.38	0.54	-0.07	1.03	0.10	0.00	4.12	5.25	10.00	4.20	0.44	1.23	-0.29	0.20	0.00	**47.07**
WP 2	7.00	1.50	6.50	0.30	14.80	3.60	4.70	2.30	3.60	3.30	3.00	2.30	3.50	5.80	2.20	3.90	0.60	1.90	2.00	**72.80**
	0.59	0.13	2.55	0.00	5.91	1.48	0.84	0.30	2.40	3.30	0.16	0.10	1.50	1.14	1.11	0.53	0.41	0.40	0.30	**23.15**
	6.41	1.37	3.95	0.30	8.89	2.12	3.86	2.00	1.20	0.00	2.84	2.20	2.00	4.66	1.09	3.37	0.19	1.50	1.70	**49.65**
WP3	1.20	4.10	2.80	0.00	8.60	1.00	4.70	0.80	3.30	0.00	11.00	0.10	0.00	5.00	0.00	2.30	1.60	1.80	2.00	**50.30**
	0.49	2.05	1.18	0.00	3.25	0.18	0.89	0.09	4.70	0.00	1.19	0.03	0.00	1.16	0.00	1.10	0.84	0.40	1.00	**18.55**
	0.71	2.05	1.62	0.00	5.35	0.82	3.81	0.71	-1.40	0.00	9.81	0.07	0.00	3.84	0.00	1.20	0.76	1.40	1.00	**31.75**

Table 2 cont'd. PMs planned (grey shaded), actual (no shading) and remaining (black) per WP and per partner. Partner totals highlighted in red are those that have used 36% or less PMs during the reporting period. Total PMs for the project are highlighted in green.

Partner	1 UOB	2 BIOVER	3 UNIPG	4 NORDGEN	5 URJC	6 PSR	7 WUR	8 EUROSITE	9 OMKI	10 IPK	11 AARI	12 LUKE	13 INIAV	14 DIMITRA	15 DSS	16 ARCN	17 UPV	18 PLANTLIFE	19 ESA	WP totals
WP4	3.40	2.20	11.10	0.80	7.20	1.00	0.30	2.00	3.60	0.50	5.00	3.20	7.40	1.50	0.30	0.50	1.20	2.10	1.00	**54.30**
	0.89	0.21	2.15	0.00	0.49	0.12	0.03	0.76	0.20	0.00	0.00	0.03	2.00	0.00	0.10	0.00	0.49	0.60	0.00	**8.07**
	2.51	1.99	8.95	0.80	6.71	0.88	0.27	1.24	3.40	0.50	5.00	3.17	5.40	1.50	0.20	0.50	0.71	1.50	1.00	**46.23**
WP 5	1.80	1.60	4.30	0.10	0.60	1.00	0.10	0.40	1.40	0.40	2.40	0.10	1.60	0.40	0.10	0.20	0.20	18.00	0.60	**35.30**
	4.62	0.18	1.02	0.30	0.41	0.12	0.00	0.51	1.00	0.40	0.25	0.00	1.00	0.70	0.31	0.14	0.12	5.20	0.30	**16.58**
	-2.82	1.42	3.28	-0.20	0.19	0.88	0.10	-0.11	0.40	0.00	2.15	0.10	0.60	-0.30	-0.21	0.06	0.08	12.80	0.30	**18.72**
WP 6	9.10	0.20	0.50	0.20	0.10	0.20	0.10	0.60	0.50	0.20	0.90	0.10	2.60	0.60	0.10	0.80	0.40	1.10	0.30	**18.60**
	8.18	0.03	0.24	0.12	0.19	0.07	0.03	0.24	0.28	0.10	0.43	0.10	0.30	0.30	0.20	0.29	0.53	0.40	0.10	**12.13**
	0.92	0.17	0.26	0.08	-0.09	0.13	0.07	0.36	0.22	0.10	0.47	0.00	2.30	0.30	-0.10	0.51	-0.13	0.70	0.20	**6.47**
Partner totals	**24.90**	**10.20**	**46.10**	**2.60**	**41.00**	**7.80**	**10.00**	**8.20**	**13.70**	**4.60**	**30.30**	**12.80**	**28.10**	**20.10**	**3.30**	**9.20**	**6.40**	**25.30**	**6.10**	**310.70**
	16.28	**2.72**	**11.35**	**0.74**	**18.57**	**2.43**	**1.96**	**2.97**	**9.78**	**4.00**	**5.91**	**2.01**	**7.80**	**5.90**	**1.88**	**2.33**	**5.08**	**7.20**	**1.90**	**110.81**
	8.62	**7.48**	**34.75**	**1.86**	**22.43**	**5.37**	**8.04**	**5.23**	**3.92**	**0.60**	**24.39**	**10.79**	**20.30**	**14.20**	**1.42**	**6.87**	**1.32**	**18.10**	**4.20**	**199.89**

Table 3. Estimated eligible costs per partner for the project, actual expenditure in the reporting period, and remaining estimated eligible costs. Partners with a high percentage (65% or more) of remaining eligible costs are highlighted in red[19]. All costs are shown in euros.

	TOTAL ESTIMATED ELIGIBLE COSTS						ACTUAL EXPENDITURE RP1				ESTIMATED ELIGIBLE COSTS REMAINING (Inc indirect costs)	
BENEFICIARY	Personnel	Sub-contracting	Other direct costs	Indirect costs	Totals	Max EU contribution	Personnel	Other direct costs	Indirect costs	Requested EU contribution	Totals and percentages	
1 UOB	167,262.80	64,144.00	48,302.00	53,891.20	333,600.00	333,600.00	58,947.03	23,106.83	20,513.47	102,567.33	231,032.67	69%
2 BIOVER	112,440.00	0.00	13,200.00	31,410.00	157,050.00	157,050.00	39,377.66	3,263.76	10,660.36	53,301.78	103,748.22	66%
3 UNIPG	165,963.00	0.00	11,677.00	44,410.00	222,050.00	222,050.00	58,638.00	4,791.51	15,857.38	79,286.89	142,763.11	64%
4 NORDGEN	21,800.00	0.00	2,240.00	6,010.00	30,050.00	30,050.00	5,812.00	2,118.95	1,982.74	9,913.69	20,136.31	67%
5 URJC	155,640.00	0.00	6,000.00	40,410.00	202,050.00	202,050.00	60,074.19	2,681.26	15,688.86	78,444.31	123,605.69	61%
6 PSR	64,740.00	0.00	6,500.00	17,810.00	89,050.00	89,050.00	24,638.00	6,328.15	7,741.54	38,707.69	50,342.31	57%
7 WUR	69,640.00	0.00	8,400.00	19,510.00	97,550.00	97,550.00	16,839.00	308.40	4,286.85	21,434.25	76,115.75	78%
8 EUROSITE	34,640.00	0.00	5,400.00	10,010.00	50,050.00	50,050.00	11,028.29	3,178.24	3,551.63	17,758.16	32,291.84	65%
9 OMKI	35,370.00	0.00	5,870.00	10,310.00	51,550.00	51,550.00	15,847.33	2,831.63	4,669.74	23,348.70	28,201.30	55%
10 IPK	25,240.00	0.00	4,000.00	7,310.00	36,550.00	36,550.00	20,786.82	1,604.78	5,597.90	27,989.50	8,560.50	23%
11 AARI	45,660.00	0.00	14,380.00	15,010.00	75,050.00	75,050.00	7,618.67	7,177.98	3,699.16	18,495.81	56,554.19	75%
12 LUKE	84,890.00	0.00	10,750.00	23,910.00	119,550.00	119,550.00	12,434.54	2,899.60	3,833.54	19,167.68	100,382.32	84%
13 BPGV	46,990.00	0.00	5,850.00	13,210.00	66,050.00	66,050.00	19,126.33	2,811.18	5,484.38	27,421.89	38,628.11	58%
14 DIMITRA	41,214.00	0.00	9,226.00	12,610.00	63,050.00	63,050.00	11,690.00	4,261.74	3,987.94	19,939.68	43,110.32	68%
15 DSS	22,840.00	0.00	3,600.00	6,610.00	33,050.00	33,050.00	12,817.15	2,325.19	3,785.59	18,927.93	14,122.07	43%
16 ARCN	36,740.00	0.00	8,900.00	11,410.00	57,050.00	57,050.00	9,395.54	4,553.84	3,487.35	17,436.73	39,613.27	69%
17 UPV	33,650.00	0.00	1,990.00	8,910.00	44,550.00	44,550.00	29,037.69	1,065.58	7,525.82	37,629.09	6,920.91	16%
18 PLANTLIFE	77,082.00	0.00	110,558.00	46,910.00	234,550.00	234,550.00	21,493.44	30,271.99	12,941.36	64,706.79	169,843.21	72%
19 ESA	28,540.00	0.00	1,500.00	7,510.00	37,550.00	37,550.00	8,889.51	1,642.44	2,632.99	13,164.94	24,385.06	65%
TOTALS	**1,270,341.80**	**64,144.00**	**278,343.00**	**387,171.20**	**2,000,000.00**	**2,000,000.00**	**444,491.19**	**107,223.05**	**137,928.60**	**689,642.84**	**1,310,357.16**	**66%**

[19] With the exceptions UOB, which manages the budget for subcontracting for the development of informatics tools, and PLANTLIFE, which manages the budget for FPA travel to workshops and the final conference.