AGFORWARD
Agroforestry for Europe

AGFORWARD
Second Periodic Report
1 January 2015 - 30 June 2016

Grant Agreement number: 613520
Project acronym: AGFORWARD
Project title: AGroFORestry that Will Advance Rural Development
Funding Scheme: 7th Framework Programme of RTD, 2 – Biotechnologies, Agriculture and Food
Date of Annex I against which the assessment will be made: 2 May 2016
Periodic report: 1st □ 2nd X 3rd □
Period covered: 1 January 2015 to 30 June 2016
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31 August 2016

AGFORWARD (Grant Agreement N° 613520) is co-funded by the European Commission, Directorate General for Research & Innovation, within the 7th Framework Programme of RTD. The views and opinions expressed in this report purely those of the writers and may not in any circumstances be regarded as stating an official position of the European Commission

Reference:
Burgess PJ, den Herder M, Dupraz C, Garcia de Jalon S, Garnett K, Graves AR, Hermansen JE, Liagre F, Mirck J, Moreno G, Mosquera-Losada MR, Palma JHN, Pantera A, Plieninger T (2016). AGFORWARD Second Periodic Report: January 2015 to June 2016. Cranfield University: AGFORWARD.

Project acronym: AGFORWARD
Grant Agreement number: 613520
Project title: AGroFORestry that Will Advance Rural Development
Funding Scheme: Collaborative Project

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Photo on the front page is of pruned oaks in oak dehesas by Gerardo Moreno

Declaration by the scientific representative of the project coordinator

I, as scientific representative of the coordinator of this project and in line with the obligations as stated in Article II.2.3 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate):
  - ☐ has fully achieved its objectives and technical goals for the period;
  - ☑ has achieved most of its objectives and technical goals for the period with relatively minor deviations.
  - ☐ has failed to achieve critical objectives and/or is not at all on schedule.
- The public website, if applicable
  - ☑ is up to date
  - ☐ is not up to date
- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (submitted electronically) and if applicable with the certificates on financial statement.
- All beneficiaries, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under section B.10 (Project Management) in accordance with Article II.3.f of the Grant Agreement.

Name of scientific representative of the Coordinator: Paul Burgess

Date: 31/08/2016

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List of acronyms

Participant no.	Participant organisation name	Acronym	Country
1.	Cranfield University	CRAN	UK
2.	European Forest Institute	EFI	International
	Third party : Sveriges Lantbruksuniveritet	SLU	Sweden
3	Association de Coordination Technique Agricole	ACTA	France
	Third party: Centre National de la Propriete Forestiere	IDF	France
	Third party: Institut de L'elevage	IDELE	France
4	University of Santiago de Compostela	USC	Spain
5	TEI Stereas Elladas	TEI	Greece
6	Institut National de la Recherche Agronomique	INRA	France
7	Organic Research Centre	ORC	UK
8	BTU Cottbus-Senftenberg	BTU	Germany
9	Universidad de Extremadura	UEX	Spain
10	Instituto Superior de Agronomia, University of Lisbon	ISA	Portugal
11	University of Copenhagen	UCPH	Denmark
12	Research Station FDEA-ART Zurich	FDEA	Switzerland
13	Werkgroep voor Rechtvaardige en Verantwoorde Landbouw (Wervel vzw)	WER	Belgium
14.	Aarhus University	AU	Denmark
15	Agri Food and Biosciences Institute	AFBI	UK
16	Consiglio per la Ricerca e la Sperimentazione in Agricoltura *Renamed:* Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria	CREA	Italy
17	Louis Bolk Institute	LBI	The Netherlands
18	Consiglio Nazionale delle Ricerche	CNR	Italy
19	Nyugat-Magyarorszagi Egyetem Kooperacios Kutatasi Kozpont Nonprofit KFT	NYME	Hungary
20	Universitatea Babes Bolyai	UBB	Romania
21	Veneto Agricoltura	VEN	Italy
22	Agroof	AGROOF	France
23	Assemblée Permanente des Chambres d'Agriculture	APCA	France
24	Association Française d'AgroForesterie	AFAF	France
25	World Agroforestry Centre (International Centre for Research in Agroforestry)	ICRAF	International
26	European Agroforestry Federation	EURAF	Pan-European

Note on the numbering of milestones and deliverables

In the original AGFORWARD Description of Work (19 September 2013), the milestones and deliverables of the project were given two numbers: the number of the work-package and the number of the milestone or deliverable within the work-package. Hence Deliverable or Milestone 9.2 was the second deliverable or milestone in work-package 9.

However, there is a different numbering system for the milestones and deliverables on the European Commission (EC) portal. For example Deliverable 9.2 became Deliverable 9.25, a deliverable from work-package 9 and the 25th deliverable on the project (Table A.1). In the new system, the milestones are now numbered in order (Table A.2). For example Milestone 9.2 becomes MS39. This report uses the numbering system on the EC Portal. A summary of the conversions are provided in the tables below.

Table A.1. Numbering of the deliverables in the Description of Work (DOW) and the new numbering system in this report to match the EC portal system (EC new)

DOW	EC new	DOW	EC new	DOW	EC new	DOW	EC new	DOW	EC new
D1.1:	D1.1	D3.2:	D3.8	D5.3:	D5.15	D7.4:	D7.22	D9.5:	D9.29
D1.2:	D1.2	D3.3:	D3.9	D6.1:	D6.16	D8.1:	D8.23	D9.6:	D9.30
D1.3:	D1.3	D4.1:	D4.10	D6.2:	D6.17	D8.2:	D8.24	D9.7:	D9.31
D2.1:	D2.4	D4.2:	D4.11	D6.3:	D6.18	D9.1:	D9.25		
D2.2:	D2.5	D4.3:	D4.12	D7.1:	D7.19	D9.2:	D9.26		
D2.3:	D2.6	D5.1:	D5.13	D7.2:	D7.20	D9.3:	D9.27		
D3.1:	D3.7	D5.2:	D5.14	D7.3:	D7.21	D9.4:	D9.28		

Table A.2. Numbering of the deliverables in the Description of Work (DOW), and the new numbering system in this report to match the EC portal system (EC new)

DOW	EC new	DOW	EC new	DOW	EC new	DOW	EC new	DOW	EC new
M1.1:	MS1	M3.3:	MS10	M4.6:	MS19	M6.3:	MS28	M8.2:	MS37
M2.1:	MS2	M3.4:	MS11	M5.1:	MS20	M6.4:	MS29	M9.1:	MS38
M2.2:	MS3	M3.5:	MS12	M5.2:	MS21	M6.5:	MS30	M9.2:	MS39
M2.3:	MS4	M3.6:	MS13	M5.3:	MS22	M7.1:	MS31	M9.3:	MS40
M2.4:	MS5	M4.1:	MS14	M5.4:	MS23	M7.2:	MS32	M10.1:	MS41
M2.5:	MS6	M4.2:	MS15	M5.5:	MS24	M7.3:	MS33	M10.2:	MS42
M2.6:	MS7	M4.3:	MS16	M5.6:	MS25	M7.4:	MS34		
M3.1:	MS8	M4.4:	MS17	M6.1:	MS26	M7.5:	MS35		
M3.2:	MS9	M4.5:	MS18	M6.2:	MS27	M8.1:	MS36		

SECTION A: Publishable summary of AGFORWARD (January 2015 to June 2016)

Summary description of the project context and the main objectives

The European Union has targets to improve the competitiveness of European agriculture and forestry, whilst improving the environment and the quality of rural life. At the same time there is a need to improve our resilience to climate change and to enhance biodiversity. During the twentieth century, large productivity advances were made by managing agriculture and forestry as separate practices, but often at a high environmental cost. In order to address landscape-scale issues such as biodiversity and water quality, we argue that farmers and society will benefit from considering land-use as a continuum including both agriculture and trees, and that there are significant opportunities for European farmers and society to benefit from a closer integration of trees with agriculture. Agroforestry is the practice of deliberately integrating woody vegetation (trees or shrubs) with crop and/or animal systems to benefit from the resulting ecological and economic interactions.

Project goal and objectives

The AGFORWARD project (Grant Agreement N° 613520) is co-funded by the European Commission, Directorate General for Research & Innovation, within the 7th Framework Programme of RTD, Theme 2 - Biotechnologies, Agriculture & Food. The project started in January 2014 and will end in December 2017. The overall goal of the project is to promote agroforestry practices in Europe that will advance sustainable rural development, i.e. improved competitiveness, and social and environmental enhancement.

The project has four objectives which are addressed through ten work packages:

1. To understand the **context** and extent of agroforestry in Europe (work-package 1);
2. To **identify, develop and field-test innovations** to improve the benefits and viability of agroforestry systems in Europe. This is being achieved through four participatory networks focused on four sectors described on the next page (work-packages 2 to 5);
3. To **evaluate** innovative agroforestry designs and practices for locations where agroforestry is currently not practised or is declining and to quantify the opportunities for uptake at a field and farm scale (work-package 6) and at a landscape scale (work-package 7);
4. To **promote** the wider adoption of appropriate agroforestry systems in Europe through policy development (work-package 8) and dissemination (work-package 9).

There is also a project management activity (work-package 10).

Summary of the work performed since the beginning of the project and the main results achieved so far

Description of work against the four objectives (January 2015 to June 2016)

1 Context: the extent of European agroforestry has been estimated to be 10.6 Mha (using a literature review) and 15.4 Mha using the pan-European LUCAS dataset (i.e. 3.6% of the territorial area or 8.8% of the utilised agricultural area). Livestock agroforestry (15.1 Mha) is, by far, the dominant type of agroforestry. The LUCAS analysis provides a uniform method to compare agroforestry areas between countries, highlighting current practice, and opportunities for expansion.

2 Identify, develop and field-test agroforestry innovations: 40 stakeholder groups established in 2014 (involving about 820 stakeholders across 13 European countries) continue to develop and field-test innovations. Each group has produced and is implementing an experimental or demonstration protocol and has described the key inputs, outputs and ecosystem services of their system on the AGFORWARD website.

For agroforestry systems of high nature and cultural value, the research on wood pastures includes methods for tree regeneration, assessments of the productivity of understorey crops, and the effect on carbon storage. The intercropping or grazing of fruit, olive or high value trees research is focused on the impact of sheep grazing in apple orchards, the intercropping of olive groves, and the use of legumes, aromatic species or sheep within walnut or chestnut plantations. Groups focused on the integration of trees in arable systems include the selection of shade-tolerant durum wheat varieties, the impact of tree rows on weed infestation, and arable crop productivity. Groups focused on the integration of trees with livestock are producing “best practice” guidelines from existing research and a feed-value database of tree components, and investigating spatial design of trees for different livestock species and helping to select shade tolerant swards.

3 Evaluation of agroforestry designs and practices at field- and landscape-scale: field-scale analysis tools are publicly available on the project website. These include the “CliPick” climate database (MS26), a database of agroforestry descriptions (MS28), improvements to the Yield-SAFE (MS29) and Hi-sAFe (MS30) models, and the web-application of the Yield-SAFE and Farm-SAFE model (Deliverable 9.3). A systematic review of the benefits of agroforestry at the landscape scale has resulted in three peer-reviewed papers, and has highlighted the benefits of agroforestry for soil erosion control and biodiversity. The twelve locations for landscape analysis have been characterised, and biodiversity and ecosystem service assessments, piloted at sites in Spain and Switzerland in 2015, have been extended to 10 other sites during 2016.

4. Policy development and dissemination: a policy analysis has highlighted the wide range of Rural Development Programme measures being used to support agroforestry. Project results are regularly disseminated on www.agforward.eu and www.facebook.com/AgforwardProject, and a quarterly electronic newsletter. The number of national associations has been extended to twelve, and a web-based training resource created. AGFORWARD also supported the Third European Agroforestry Conference attracting 287 delegates from 26 countries including many farmers. We have also initiated national conferences, TV interviews (8), oral presentations (91), poster presentations (17),

newsletter articles (19), and at least 18 workshop activities (in addition to the stakeholder groups), and eight training activities.

Project management: a successful Second General Assembly was held in Chania, Greece in June 2015 (47 participants) and a Third General Assembly at Montpellier, France in May 2016 (48 participants). The Executive Committee has met monthly via Skype, and communication has been supported by an e-mail discussion group and a Sharepoint site. Two amendments have been made to General Agreement.

Summary of the expected final results and their potential impacts and use (including socio-economic impact and the wider societal implications of the project so far)

Socio-economic impact and wider societal implications of the project

The socio-economic impact of the project is discussed in terms of the four objectives of the project.

1. To understand the context and extent of agroforestry. The pan-European LUCAS dataset can be used to provide a uniform systematic assessment of the extent of agroforestry. The analysis highlights that agroforestry is a significant European land use representing 15.4 Mha, and hence it is a valid focus for land use policy. The approach will allow the assessment of changes in land use over time, which in turn can help inform decisions regarding Land Use, Land Use Change and Forest (LULUCF) inventories in relation to climate change.
2. To identify, develop and field-test innovations. The project has established 40 stakeholder groups, which is working with about 820 stakeholders across 13 European countries. These groups are seeking to provide solutions to practical issues. Each group has produced a research protocol and a system description (which is publicly available). This resource provides a European-wide resource for stakeholders interested in establishing their own agroforestry system.
3. To evaluate innovative agroforestry designs and practices. As a result of the project, significant improvements and improved access have been provided for climate datasets and the Yield-SAFE and Hi-sAFe biophysical models of tree-crop interactions. Using these models, with the bio-economic Farm-SAFE model, allows assessment of the financial impact of agroforestry practices relative to conventional agriculture and forestry. The inclusion of environmental benefits allows assessments from a societal perspective. The use of these models can help inform improved decision making. The impact of agroforestry is also being determined at a landscape-scale where it can have a significant impact on ecosystem services such as aesthetics, recreational opportunity, and human well-being. The initial results from Spain highlights the importance of public access in maximising cultural services, and that ecosystem services are generally increased from a mosaic of landscapes.
4. To promote the wider adoption of appropriate agroforestry systems in Europe through policy development and dissemination. The Common Agricultural Policy (including rural development programmes) comprises about 39% of the annual EU budget and its effective use is of socio-economic importance. Agroforestry can offer environmental and animal welfare benefits whilst maintaining food production. A review of 2007-2013 and 2014-2020 CAP highlights that agroforestry is being supported through a wide range of rural development measures. The project is also playing a major role in disseminating best agroforestry practice. AGFORWARD staff have been active in the initiation, by the French government, of a National Plan for the Development of Agroforestry in December 2015. The successful Third European Agroforestry Conference in May 2016, supported by AGFORWARD, involved 287 delegates from 26 countries, where the speakers on the first day included the French Minister of Agriculture. The event included farmer-focused presentations, and the presentation of European agroforestry to a global audience. Across Europe, there is increasing interest in agroforestry from farmers, policy makers, and advisors, who recognise that integrating trees with farming can be both financially and environmentally beneficial.

SECTION B Project objectives, work progress and achievements, and management

Work progress and achievements during the period

This section provides an overview of the progress of the work in line with the structure of the Grant Agreement. For each of the first nine work-packages, we provide a summary of progress towards the objectives and details of each task, highlighting significant results where appropriate. During the second reporting period (13-30 months) there have been no significant deviations from the plan, and where there are small deviations these are explained.

1 Work package number 1

Work-package number	**1**
Work-package name	**Existing Agroforestry Systems in Europe**
Leader	Michael den Herder
Organisation	European Forest Institute (EFI)
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 1

Michael den Herder leads this work package which sets the context for the project. The work-package comprises four objectives and associated tasks (Table 1.1). The work-package completed one milestone and one deliverable in the first twelve months of the project, and has delivered one of two deliverables in the second reporting period (Table 1.2).

Table 1.1. Work-plan of activities (indicated in orange), milestones (M), and deliverables (D) for work-package 1 for months 12 to month 30. Deliverables and milestones in green have been delivered.

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP1 Context																									
T1.1 Inventory of AF in EU (D1.2)							D																		
T1.2 External AF innovations (D1.1)	D																								
T1.3 Stratification of AF (MS1)	M																								
T1.4 Framing AF development (D1.3)																D									
T1.5 Co-ordination of WP1																									

Table 1.2. Summary of the status of milestones and deliverables in work-package 1 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	Due date	Status
First reporting period		
MS1 Preliminary stratification and quantification of agroforestry use	Dec 2014	Completed
D1.1 Report on possible technology transfer from Mediterranean partner countries to European countries	Dec 2014	Completed
Second reporting period		
D1.2 Current extent and trends of agroforestry in the EU27	June 2015	Completed
D1.3 Report describing the socio-economic framework of agroforestry	March 2016	**Anticipated in Oct 2016**

1.1 Extent of and recent changes of agroforestry systems in Europe (completed)

Objective 1.1 was to provide an inventory and explain the extent and recent changes of agroforestry systems in Europe. This objective was achieved by Task 1.1, which provided an inventory of agroforestry by using existing EU27 land use classifications and surveys. EFI has led this work which comprised Deliverable 1.2 (Table 1.3). An initial version of the report was completed by June 2015, but continued refinements have been made. The report was updated in December 2015, and a subsequent version in August 2016 has recently been uploaded to ensure that the values in the website report match those in the submitted paper. Some key outputs are described in Box 1.1.

Table 1.3. References for Deliverable 1.2. The report is being written up in the form of paper.

den Herder M, Moreno G, Mosquera-Losada MR, Palma JHN, Sidiropoulou A, Santiago Freijanes J, Crous-Duran J, Paulo J, Tomé M, Pantera A, Papanastasis V, Mantzanas K, Pachana P, Burgess PJ (2016a). Current extent and trends of agroforestry in the EU27. Deliverable Report 1.2 for EU FP7 Research Project: AGFORWARD 613520. (15 August 2016). 2nd Edition. 76 pp. http://www.agforward.eu/index.php/en/current-extent-and-trends-of-agroforestry-in-the-eu27.html
den Herder M, Moreno G, Mosquera-Losada RM, Palma JHN, Sidiropoulou A, Santiago Freijanes JJ, Crous-Duran J, Paulo JA, Tomé M, Pantera A, Papanastasis VP, Mantzanas K, Pachana P, Papadopoulos A, Plieninger T, Burgess PJ (2016b). Current extent and stratification of agroforestry in the European Union. Submitted to Agriculture, Ecosystems and Environment.

Box 1.1. Summary of Deliverable 1.2: Current extent and trends of agroforestry in the UK27 (from den Herder et al. 2016a)

In **Milestone 1**, den Herder et al. used a literature review (which did not cover some countries) and estimated that agroforestry extends to at least 10.6 million hectares (ha) in Europe. By contrast the CORINE land cover survey (which uses only a narrow definition of agroforestry) estimates an area of 3.3 million ha in Europe. Den Herder et al. (2016a) describe the use of pan-European LUCAS Land Use and Land Cover data to estimate the area of European agroforestry. The resulting estimate is 15.4 million ha which is equivalent to 3.6% of the territorial area or 8.8% of the utilised agricultural area.

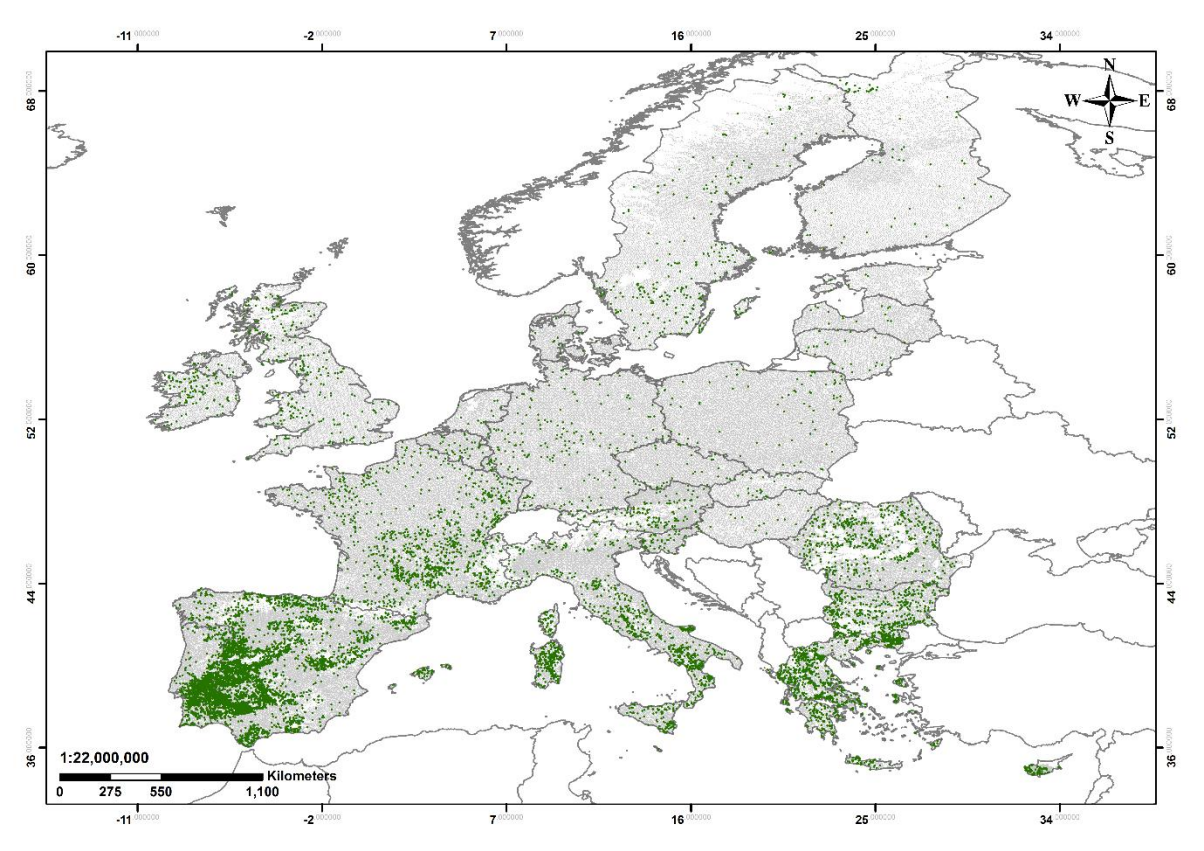
Livestock agroforestry is, by far, the dominant type of agroforestry in Europe accounting for 15.1 million ha. The area of silvoarable systems is estimated to be 0.36 million ha. The above totals include the grazing and intercropping of permanent crops (e.g. fruit trees and olives) (1.05 million ha) comprising 0.85 million ha of grazed systems and 0.22 million ha of intercropped systems. A hot spot analysis revealed that a high abundance of areas under agroforestry can be found in south, central and north-east Portugal, south-west, central and parts of north Spain, south of France, Sardinia, south Italy, central and north-east Greece, central and west Bulgaria, and an area in northern Romania.

LUCAS data were also used to estimate the extent of single trees and green linear elements such as hedgerows. Agroforestry involving single trees covers almost 300 thousand hectares corresponding to around 0.02% of the territorial area in the EU, with high values in France, Spain, the UK, and Italy. Agroforestry involving hedgerows cover about 1.78 million hectares representing around 0.42% of the territorial area in the EU, with large values in France, the UK, and Italy.

The higher estimate for the agroforestry area using the LUCAS data (15.4 million ha) than the literature review (10.6 million ha) can be partly explained by the inclusion of Bulgaria (+0.87 million ha) and higher estimates for Spain (+1.74 million ha), France (+1.05 million ha), Romania (+0.71

million ha), Italy (+0.44 million ha), the UK (+0.39 million ha), and Sweden (+0.37 million ha); there were lower estimates for Greece (-0.67 million ha) and Portugal (-0.48 million ha). When the LUCAS estimates were compared with national inventories, the LUCAS-based estimate of 5.58 million ha of agroforestry in Spain was within 10% of a national inventory value of 6.14 million ha. However, the LUCAS estimate for Portugal (1.17 million ha) was 22% lower than an estimate based on national inventories.

Although there may still be some systematic errors, because the LUCAS data were collected and analysed in a uniform manner, it provides a method to compare agroforestry areas between countries and regions. It can highlight where agroforestry is currently practiced and where there are opportunities. Considering the fact that agroforestry covers an area equivalent to 9% of the utilised agricultural area of the EU, it deserves a more prominent place on policy agendas.



Total extent of agroforestry in Europe based on LUCAS data (den Herder et al 2016a; Deliverable 1.2)

1.2 Agroforestry practices bordering Europe (completed)

Objective 1.2 was to identify and describe successful agroforestry practices in areas bordering Europe, which may be used to encourage European agroforestry. The review (Deliverable 1.1), which remains available on the AGFORWARD website, was reported in the first progress report.

1.3 Stratification of the EU28 into regions (completed)

Objective 1.3 is to stratify the EU28 into regions with different combinations of high nature (associated with work-package 2), fruit tree and olive orchards (associated with work-package 3), arable (associated with work-package 4), and livestock (associated with work-package 5) systems.

This was completed through Task 1.3 so that the stratification will help inform where particular agroforestry systems are most appropriate. The report (Milestone 1) completed in the first reporting period, was made available on the AGFORWARD website on 28 April 2015 (Table 1.4).

Table 1.4. Reference for Milestone 1

den Herder M, Burgess PJ, Mosquera-Losada MR, Herzog F, Hartel T, Upson M, Viholainen I, Rosati A (2015). Preliminary stratification and quantification of agroforestry in Europe. Milestone Report 1.1 for EU FP7 Research Project: AGFORWARD 613520. (22 April 2015). 57 pp. http://www.agforward.eu/index.php/en/preliminary-stratification-and-quantification-of-agroforestry-in-europe.html

1.4 Framework conditions under which agroforestry operates and develops (almost completed)

Objective 1.4 is to analyse the framework conditions under which agroforestry operates and develops. This is being achieved by Task 1.4, and EFI is working on a review of literature and databases containing indicators which may explain the success or failure of agroforestry. The research will result in a report (Deliverable 1.3) which was originally due in March 2016. An extension for the delivery of this report is requested until the end of October 2016.

Task 1.4 comprises two components: firstly, a set of scenarios containing idealized farm descriptions and different agroforestry management practices have been defined for each biogeographical region of Europe. These scenarios were based on literature review and expert judgment. Following the general outline defined before, the relations between criteria of analytic network process (ANP) models for each biogeographical region have been defined through a questionnaire, which was distributed to all AGFORWARD partners. The results of preliminary analysis were presented at the second general assembly in June 2015, and another questionnaire was distributed to participants who re-evaluated relations within ANP models on which there were divergent judgments. There were 44 responses from both rounds of questionnaires.

The analysis of the ANP results is being led by Marko Lovrić of the European Forest Institute. He has produced a preliminary report on the uptake of agroforestry practices using a separate ANP model for each of five European biogeographical regions (Atlantic, Boreal, Continental, Mediterranean and Pannonian). These models are being used to examine how a farm 'typical' for that region could improve its management system by implementing one of five agroforestry management options. These are implement i) high nature and cultural value agroforestry systems, ii) agroforestry with high value trees, iii) agroforestry for arable systems, iv) agroforestry for livestock systems and v) no agroforestry system. Each model comprises separate "benefits", "costs", "opportunities" and "risks" sub-networks, with a total of 40 criteria.

The initial results show that the ANP model for Atlantic region differs from the other regions, with very low priority for agroforestry with high value trees or with arable systems. In general, high nature and cultural value agroforestry systems appear to be the preferred management alternative, although livestock agroforestry systems are favoured by the model for Pannonian region. In the context of results obtained by additive negative formula which can be interpreted as providing best

long-term results, the "no agroforestry" alternative appears to be the generalised viable option in the models representing Atlantic and Boreal region.

Unfortunately, during the past year, Marko Lovrić has been ill and this has meant that the writing up and the final discussion for the ANP analysis has been delayed. Marko's health has recently improved and it is anticipated that Deliverable 1.3 will be completed by October 2016. Associated with the same deliverable, EFI and USC have been leading a series of interviews (in association with work-package 8) to allow a qualitative study on the uptake of agroforestry using grounded theory. Partners working in work-packages 2, 3, 4 and 5 have conducted a series of interviews with farmers across Europe, with the goal of defining factors which affect the uptake of differing agroforestry practices. The interviews, performed under guidance from EFI staff have been performed in 14 locations. The majority of the interviews are analysed, and this will also be included in Deliverable 1.3 due in October 2016.

1.5 Co-ordination and synthesis of work

The fifth task (Task 1.5) in this work-package, led by Michael den Herder, has been to co-ordinate and synthesise the research across the work-package. He has also attended the monthly Executive Board meetings held via Skype. Michael led a work-package 1 workshop at the Second General Assembly meeting in Chania, Greece in June 2015, and presented the paper on the extent of agroforestry in Europe (den Herder et al. 2016b) at the Third European Agroforestry Conference in Montpellier.

1.6 Use of resources in work-package 1

As of June 2016, 43.12 person months had been allocated to work-package 1, equivalent to 103% of the total (Table 1.5). EFI has exceeded the planned input into the work-package, but the outputs of this work-package 1 are close to being finalised.

Table 1.5. Person-month inputs to work-package 1

Organisation	First period (Jan to Dec 2014)	Second period (Jan 2015 to Jun 2016)	Sub-total	Project budget
EFI	11.46	14.17	25.63	15
ICRAF	6.00	0.00	6.00	6
USC	0.20	3.30	3.50	4
UEX	1.00	2.00	3.00	3
EURAF	0.35	0.30	0.65	3
UPCH	0.00	0.00	0.00	3
AFAF	0.27	0.68	0.95	2
TEI	0.26	0.51	0.77	2
CRAN	0.27	0.73	1.00	1
ISA	0.25	0.75	1.00	1
CREA	0.12	0.25	0.37	1
FDEA	0.00	0.00	0.00	1
NYME	0.00	0.25	0.25	0
Total	20.18	22.94	43.12	42

1.7 Issues/actions

An extension is requested for Deliverable 1.3 (March 2016) with a new deadline of October 2016 because of an illness of one of EFI's specialised employees. October 2016 should be a feasible extension for delivering the task.

2 Work package number 2

Work-package number	**2**
Work-package name	**High Nature and Cultural Value Agroforestry**
Leader	Gerardo Moreno
Organisation	Universidad de Extremadura (UEX)
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 2

Gerardo Moreno is leading this work package which is focused on established agroforestry systems that are recognised as having high nature and cultural value (HNCV); most of the systems are a form of wood pasture. During the first reporting period, 10 stakeholder groups were established and a report on testable innovations was produced (Table 2.1; Table 2.2). Research protocols have been established and the systems have been characterised in the second reporting period.

Table 2.1. Work-plan of activities, milestones (MS), and deliverables (D) for work-package 2 for months 12 to month 30 (indicated in orange), and plan until month 36 (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP2 HNCV agroforestry																									
T2.1 Establish PRD network (MS2) Completed in first period																									
T2.2 Characterise system (D2.4)													D												
T2.3 Identify testable innovations (MS3) and establish protocols (MS4); Completed in first period	M	M																							
T2.4 Test, analyse, interpret and cost innovation (MS5; D2.5)																					M				
T2.5 Evaluate innovations on-farm to produce guidelines (MS6; D2.6)																									
T2.6 Dissemination of results (MS7)																									
T2.7 Co-ordination of WP2																									

Table 2.2. Summary of the status of milestones and deliverables in work-package 2 for First Reporting Period (Month 0-12), Second Reporting Period (Month 13-30), and remainder of project

Description	Due date	Status
First progress period		
MS2 Establishment of PRD network	Aug 2014	Completed and on website
MS3 Identification of innovations to be tested	Dec 2014	Completed and on website
Second progress period		
MS4 Establish protocols	Jan 2015	Completed and on website
D2.4 Characterise systems	Dec 2015	Completed and on website
Third reporting period (on-going)		
MS5 Report on studied innovations	Aug 2016	On-going
MS6 Report with guidelines	Aug 2017	Initial preparations
MS7 Dissemination of results	Dec 2017	On-going
D2.5 Guidelines to producers	Aug 2017	Initial preparations

2.1 Establish a participatory research and development network (completed)

Objective 2.1 was to identify examples of existing best practice, the key challenges, and possible innovations to improve the resilience and reinforce the ecosystem services of HNCV agroforestry systems across Europe. This objective was achieved by establishing the network and holding stakeholder workshops in selected countries (Task 2.1). The first objective was achieved during the first reporting period through ten stakeholder groups (Figure 2.1) and an associated report was produced to prioritise innovations.

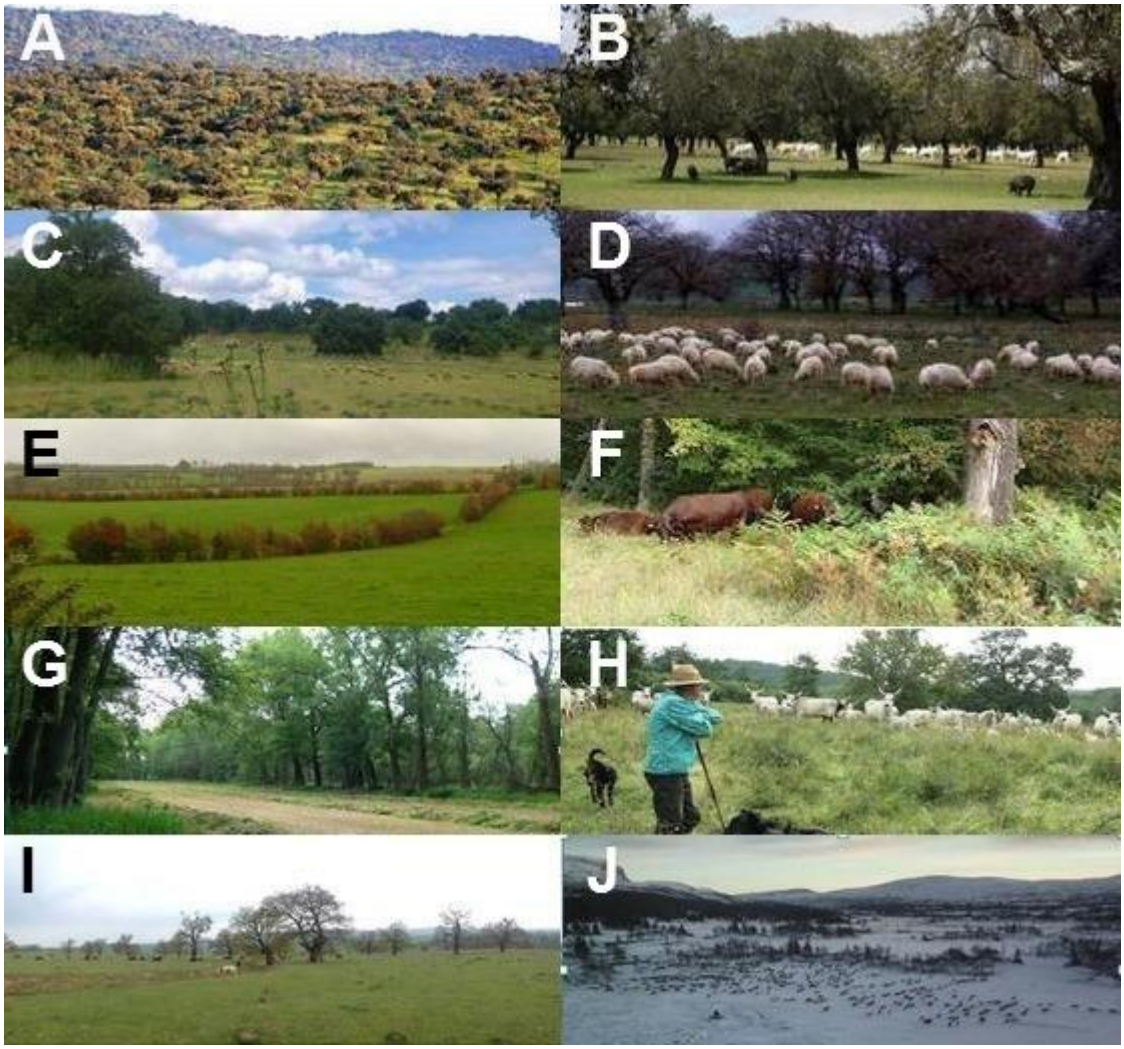


Figure 2.1. Agroforestry systems of high nature and cultural value across Europe; in A) Spain, B) Portugal, C) Greece, D) Sardinia, Italy, E) Brittany, France, F) UK, G) Germany, H) Hungary, I) Romania and J) Sweden

Reports, comprising Milestone 2**,** were reported in the first reporting period (Table 2.3). The challenges identified by the ten groups were grouped under nine topics: low farm profitability, a need for new system design and management, reduction of the costs of tree protection and regeneration, improvement of pasture quality, adaptation of grazing schemes and cost-efficient herding, increased animal production, measures for nature conservation, more efficient mechanisms for knowledge dissemination among stakeholders, and policy and governance.

Table 2.3. References for the ten stakeholder reports comprising Milestone 2

Moreno G (2014). Initial Stakeholder Meeting Report: Dehesa farms in Spain. 17 September 2014. 19 pp. Available online: http://www.agforward.eu/index.php/en/dehesa-farms-in-spain.html

Crous-Duran J, Amaral Paulo J, Palma J (2014). Initial Stakeholder Meeting Report: Montado in Portugal. 4 September 2014. 12 pp. Available online: http://www.agforward.eu/index.php/en/montado-in-portugal.html

Pantera A (2014). Initial Stakeholder Meeting Report: Valonia oak silvopastoral systems in Greece. 17 September 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/valonia-oak-silvopastoral-systems-in-greece.html

Pisanelli A, Camilli F, Seddaiu G, Franca A (2014). Initial Stakeholder Meeting Report: Grazed oak woodlands in Sardinia. 15 October 2014. 9 pp. Accessed online: http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html

Thenail C, Viaud V, Hao H (2014). Initial Stakeholder Meeting Report: Bocage agroforestry in Brittany, France. 2 December 2014. 10 pp. Available online: http://www.agforward.eu/index.php/en/bocage-agroforestry-in-brittany-france.html

Upson M, Burgess PJ (2014). Initial Stakeholder Meeting Report: Wood pasture and parkland in the UK. 2 October 2014. 10 pp. Available online: http://www.agforward.eu/index.php/en/wood-pasture-and-parkland-in-the-uk.html

Tsonkova P, Mirck J (2014). Initial Stakeholder Meeting Report: Agroforestry in the Spreewald Flood Plain, Germany. 20 October 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-in-the-spreewald-flood-plain-germany.html

Vityi A, Varga A (2014). Initial Stakeholder Meeting Report: Wood pasture in Hungary. 13 pp. 18 October 2014. Available online: http://www.agforward.eu/index.php/en/wood-pasture-in-hungary.html

Hartel T (2014). Initial Stakeholder Meeting Report: Wood Pastures in Romania. (Ed. PJ Burgess). 16 November 2014. 8 pp. http://www.agforward.eu/index.php/en/wood-pastures-in-southern-transylvania-romania.html

Berg S, Lind T (2014). Initial Stakeholder Meeting Report: Wood pasture and reindeer in Sweden. 27 October 2014. 13 pp. Available online: http://www.agforward.eu/index.php/en/wood-pastures-and-reindeer-in-sweden.html

2.2 Characterising the systems (completed)

Objective 2.2 is to describe the key inputs, outputs and ecosystem service flows for case study systems in the selected countries. This has been a key focus of work (Task 2.2) during the Second Reporting Period, and the individual reports (Table 2.4) have been synthesised into a single report called Deliverable 2.4 (Table 2.5). Deliverable 2.4 and the associated individual reports describe the components, structure and outputs of the systems.

Table 2.4. References for the ten reports that contributed to Deliverable 2.4

Aviron S, Thenail C, Viaud V (2016). System report: Bocage Agroforestry in France. Contribution to Deliverable 2.4, AGFORWARD project, 20 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html http://www.agforward.eu/index.php/en/bocage-agroforestry-in-brittany-france.html

Hartel T, Răzvan P, Rákosy L (2016). System report: Wood-pasture in Southern Transylvania. Contribution to Deliverable 2.4, AGFORWARD project, 18 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html http://www.agforward.eu/index.php/en/wood-pastures-in-southern-transylvania-romania.html

Lopez Bernal A, Burgess PJ, Upson M, Garcia de Jalon S (2016). System report: Wood Pasture and Parkland in the UK. Contribution to Deliverable 2.4, AGFORWARD project, 41 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html http://www.agforward.eu/index.php/en/wood-pasture-and-parkland-in-the-uk.html

Moreno G, Cáceres Y (2016). System report: Iberian dehesa, Spain. Contribution to Deliverable 2.4, AGFORWARD project, 60 pp. Available online http://www.agforward.eu/index.php/en/dehesa-farms-in-spain.html

Papadopoulos A, Pantera A, Mantzanas K, Papanastasis V, Fotiadis G, Papaspyropoulos K (2016). System report: Valonia Oak Silvopastoral Systems in Greece. Contribution to Deliverable 2.4, AGFORWARD project, 19 pp. Available online http://www.agforward.eu/index.php/en/valonia-oak-silvopastoral-systems-in-greece.html

Paulo JA, Crous-Duran J, Firmino PN, Faias SP, Palma JHN (2016). System report: cork oak silvopastoral systems in Portugal. Contribution to Deliverable 2.4, AGFORWARD project, 28 pp. Available online http://www.agforward.eu/index.php/en/montado-in-portugal.html

Sanna F, Re GA, Franca A (2016). System report: Grazed Oak Woodlands in Sardinia, Italy. Contribution to Deliverable 2.4, AGFORWARD project, 21 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html

Tsonkova P, Mirck J (2016). System report: Agroforestry in the Spreewald Floodplain, Germany. Contribution to Deliverable 2.4, AGFORWARD project, 20 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html http://www.agforward.eu/index.php/en/agroforestry-in-the-spreewald-flood-plain-germany.html

Valinger E, Lind T (2016). System report: Reindeer Husbandry in Central Sweden. Contribution to Deliverable 2.4, AGFORWARD project, 9 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html http://www.agforward.eu/index.php/en/wood-pastures-and-reindeer-in-sweden.html

Vityi A, Varga A (2016). System report: Wood Pasture in Hungary. Contribution to Deliverable 2.4, AGFORWARD project, 13 pp. Available online http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html http://www.agforward.eu/index.php/en/wood-pasture-in-hungary.html

Table 2.5. A synthesis report of the system descriptions for work-package 2 (Deliverable 2.4)

Moreno G, Aviron S, Berg S, Burgess PJ, Cáceres Y, Crous-Duran J, Faias SP, Firmino PN, Fotiadis G, Franca A, Garcia de Jalon S, Hartel T, Lind T, López Bernal A, Mantzanas K, Mirck J, Palma J, Pantera A, Paulo JA, Papadopoulos A, Papanastasis V, Papaspyropoulos K, Popa R, Porqueddu C, Rákosy L, Re GA, Sanna F, Thenail C, Tsonkova P, Valinger E, Varga A, Viaud V and Vityi A (2016). Agroforestry of High Nature and Cultural Value: Synthesis of System Descriptions. Deliverable 2.4 (2.1) for EU FP7 Research Project: AGFORWARD 613520. 23 pp. http://www.agforward.eu/index.php/en/describing-high-nature-and-cultural-value-agroforestry-systems-a-summary.html

2.3 Identify testable innovations and establish protocols (completed)

Objective 2.3 was to agree, within the PDRN, the key innovations or improvements in quantification that could promote the uptake of high nature and cultural value agroforestry. This was addressed by Task 2.3, which was to agree the innovations to be tested by each stakeholder group either at experimental sites or on-farm in December 2014. This was completed with the release of a report (Milestone 3) on the AGFORWARD website in January 2015 (Table 2.6).

Table 2.6. Reference for the reports describing innovations for high nature and cultural value agroforestry (Milestone 3)

Moreno G, Berg S, Burgess PJ, Camilli F, Crous-Duran J, Franca A, Hao H, Hartel T, Lind T, Mirck J, Palma J, Amaral Paulo J, Pisanelli A, Seddaiu G, Thenail C, Tsonkova P, Upson M, Valinger E, Varga A, Viaud V, Vityi, A (2015). Innovations to be examined for High Nature and Cultural value Agroforestry. Milestone 2.2 (MS 3) for EU FP7 Research Project: AGFORWARD 613520. 20 pp. 20 January 2015. http://www.agforward.eu/index.php/en/innovations-to-be-examined-for-high-nature-and-cultural-value-agroforestry.html

The report highlighted that research was needed both to close the knowledge gap and to undertake new experimental and field-trials work. The closing the knowledge gap, in terms of providing a detailed description of the system is described in the preceding Section 2.2. During early 2015, each of the stakeholder groups developed and wrote up their research and development plans in terms of a protocol. Each of the protocols went through a process of review, were finally approved and placed on the website by June 2015 (Table 2.7).

Table 2.7. Reports (Milestone 4) describing the research and development protocol for each group

Franca A, Seddaiu G, Porqueddu C (2015). Research and Development Protocol for Grazed Oak Woodlands in Sardinia. March 2015. 8 pp. http://www.agforward.eu/index.php/en/grazed-oak-woodlands-in-sardinia.html

Hartel T, Popa R, Rákosy L (2015). Research and Development Protocol for Wood Pastures in Southern Transylvania, Romania. July 2015. 19 pp. http://www.agforward.eu/index.php/en/wood-pastures-in-southern-transylvania-romania.html

Moreno G, Cáceres Y, Juárez E, Bertomeu M, Pulido F, Gaspar P, Mesías FJ, Escribano M, Bustos P (2015). Research and Development Protocol for Iberian Dehesas in Spain. February 2015. 71 pp. http://www.agforward.eu/index.php/en/dehesa-farms-in-spain.html

Papadopoulos A, Pantera A, Mantzanas K, Papanastasis V (2015). Research and Development Protocol for Valonia oak silvopastoral system. March 2015. 12 pp. http://www.agforward.eu/index.php/en/valonia-oak-silvopastoral-systems-in-greece.html

Paulo JA, Faias SP, Tomé M, Palma JHN (2015). Research and Development Protocol for Cork Oak Woodlands in Portugal. February 2015. 10 pp. http://www.agforward.eu/index.php/en/montado-in-portugal.html

Thenail C, Viaud V, Aviron S (2015). Research and Development Protocol for Bocage agroforestry in Brittany. June 2015. 13 pp. http://www.agforward.eu/index.php/en/bocage-agroforestry-in-brittany-france.html

Tsonkova P, Mirck J (2015). Research and Development Protocol for Agroforestry in the Spreewald Floodplain, Germany. May 2015. 11 pp. http://www.agforward.eu/index.php/en/agroforestry-in-the-spreewald-flood-plain-germany.html

Upson M, Burgess PJ (2015). Research and Development Protocol for the Wood Pastures and Parkland in the UK. April 2015. 9 pp. http://www.agforward.eu/index.php/en/wood-pasture-and-parkland-in-the-uk.html

Valinger E, Lind T, Berg S (2015). Research and Development Protocol for the Wood Pastures and Reindeer in Sweden. March 2015. 10 pp. http://www.agforward.eu/index.php/en/wood-pastures-and-reindeer-in-sweden.html

Vityi A, Varga A (2015). Research and Development Protocol for Wood Pastures in Hungary. March 2015. 10 pp. http://www.agforward.eu/index.php/en/wood-pasture-in-hungary.html

Table 2.8. A synthesis report of the research and development protocols for work-package 2 (Milestone 4) was produced in October 2015.

Moreno G, Aviron S, Berg S, Bertomeu M, Bustos P,Cáceres Y, Escribano M, Franca A, Gaspar P, Hartel T, Juárez E, Lind T, Mantzanas K, Mesías FJ, Mirck J, Pacheco Faias S, Palma JHN, Pantera A, Papadopoulos A, Papanastasis V, Paulo JA, Popa R, Porqueddu C, Pulido F, Rákosy L, Seddaiu G, Thenail C, Tomé M, Tsonkova P, Upson M, Valinger E, Varga A, Viaud A, Vityi A, Burgess PJ (2015). Synthesis of the Research and Development protocols related to High Nature and Cultural Value Agroforestry. Milestone Report 4 (2.3) for EU FP7 Research Project: AGFORWARD 613520. 16 October 2015. 22 pp. http://www.agforward.eu/index.php/en/synthesis-of-the-research-and-development-protocols-related-to-high-nature-and-cultural-value-agroforestry.html

2.4 Test and analyse innovations to provide guidelines (on-going)

Now that the research and development protocols have been agreed, the participants of the work-package are addressing Objective 2.4 which is to test the proposed innovations, and to then analyse and interpret the results. This is being achieved through Task 2.4 involving experiments with replicates, through Task 2.5 on-farm demonstrations. This will lead to a report (MS5) describing the preliminary results of the innovations and wider perspectives due in August 2016.

By the end of December 2014, field tests had been initiated by UEX, CNR and TEI. For example CNR started a field experiment on shading tolerance of legumes and grasses in a silvopastoral context. UEX started an evaluation of the response of different varieties of Triticale (double-cropping fodder crop) intercropped among oak trees, and the evaluation of new models of natural and artificial protector for oak regeneration in Iberian dehesas. Lastly UEX started development of a prototype of GPS collar to help automate livestock management in extensive wood-pastures.

Between January 2015 and June 2016, UEX has being implementing its plan for field and laboratory work in Spain (See Moreno and Cáceres (2016) in Table 2.4). The field experiments include:

1. Comparison of cost-efficient methods for tree regeneration including the study of nursery shrubs, artificial wire thorny shelters, natural protectors (pruned branches), and chemical organic repellents.
2. Evaluation of cultivars of triticale, a forage crop.
3. Search of forage legume species that perform well under tree shade conditions, grazing pressure and long dry periods.
4. Assessment of the feasibility of fast-intensive rotational grazing against regular grazing for livestock breeding in Iberian dehesas.
5. Exploration of the potential of multipurpose GPS collar to facilitate livestock management and to protect young tree regeneration.
6. Exploration of consumer acceptance for agroforestry products and services, and
7. Evaluation of the carbon sink strength of Iberian dehesas.

In the UK, Cranfield undertook work with an MSc student, Alicia Lopez Bernal, on the impact of wood pasture restoration measures on the age distribution of tree species and of the understorey. Cranfield has also analysed and interpreted the impact of tree planting on grassland on the soil carbon which is reported in a peer-reviewed paper (Upson et al. 2016). The research indicates that whilst planting widely-spaced trees increases overall carbon storage (due to the biomass of the trees), after 14 years under the cool and wet environment of the UK, the tree planting was associated with a reduction in soil organic carbon relative to grassland. The paper attributes the reduction to reduced understorey biomass production, as even larger reductions in soil organic carbon occurred when closely-planted trees were planted on grassland.

CNR-ISPAAM is implementing an experiment on the shade tolerance of pasture legumes within a silvopastoral system. The protocol was shared and defined together with UNEX (G. Moreno) and TEI (A. Pantera). The three-year trial will end on June 2017. The results have been presented at two international conference/workshop held in December 2015 at Sassari in Italy, in June 2015 at Zaragoza in Spain, and at a national workshop in January 2016 at Sassari. ISPAAM also organized an international workshop entitled “Mediterranean Agro-silvo pastoral systems: Searching for Trade-off

among Provisioning, Regulating and Cultural Ecosystem Services" which was held at Sassari, 15 December 2015. This provided a good forum for dissemination of results

NYME in Hungary are continuing to implement their research and development protocol, including habitat mapping, ecosystem survey, questionnaires, and soil measurements at Pénzesgyőr, Bogyiszló.

TEI in Greece are progressing with an experiment on the forage legume performance under oak shade. The protocol was shared and defined together with UNEX (G. Moreno) and CRN (A. Franca)

UBB have continued with their programme of research and development related to ancient trees and wood pastures in Romania. The dissemination activities related to wood pastures in Romania are worthy of particular comment.

2.5 Dissemination of results (on-going)

An on-going objective of the work-package (Objective 2.5) is to provide and promote guidelines for farmers on how to establish economically viable agroforestry practices to improve the resilience of wood-pasture and other agroforestry systems of high nature value. Some of the principal dissemination activities are described in Table 9.8.

In May 2015, UBB hosted an expert group on wood-pasture systems from UK (http://www.ancienttreeforum.co.uk/study-tour-of-romanian-wood-pastures/). In June 2015, Tibi Hartel met with the HRH Prince of Wales, from the UK, who launched the "Remarkable Trees of Romania" project (http://agforward.eu/index.php/en/news-reader/id-2-june-2015.html). In November 2015, Tibi Hartel was also part of organising team for a wood-pasture policy event in Brussels entitled: "Europe's wood pastures: condemned to a Slow Death by the Common Agricultural Policy?" The report is available on the AGFORWARD site at: http://agforward.eu/index.php/en/news-reader/id-17-november-2015.html. The presentation of Tibi Hartel is available at: http://www.slideshare.net/harteltibor/romanian-woodpastures-and-the-common-agricultural-policy-55286113

2.6 Co-ordination of the work in work-package 2

During the reporting period, the work-package leader (Gerardo Moreno) has actively participated in Executive Board. Most of the partners (BTU, UEX, INRA, TEI, NymE KKK, ISA, TEI and CRAN) attended and participate actively at the WP2 meeting hold during the General Assembly in Crete between 24 and 26 June 2015 and at the Third General Assembly on 26-27 May 2016.

2.7 Use of resources in work-package 2

At the end of June 2016, 87.40 person months had been allocated to work-package 2, equivalent to 80% of the total (Table 2.9). The input of person months has been relatively high at UEX and INRA, but both organisations have confirmed that these inputs do not undermine their ability to provide the milestones and deliverables in the final stage of the project.

Table 2.9. Person-month inputs to work-package 2 for First Reporting Period (Jan – Dec 2014), and Second Reporting Period (Jan 2015-June 2016)

	First period (Jan-Dec 2014)	Second period (Jan 2015–June 2016)	Sub-total	Project budget
UEX	6.10	24.00	30.10	28
INRA	5.34	6.10	11.44	11
ISA	2.50	4.55	7.05	10
CNR	2.25	3.38	5.63	9
NYME	1.64	3.26	4.90	9
TEI	1.21	2.24	3.45	9
UBB	1.07	3.19	4.26	9
BTU	3.14	4.03	7.17	8
CRAN	2.93	3.02	5.95	8
EFI	1.47	2.51	3.98	6
EFI (SLU)	1.24	1.93	3.17	
EURAF	0.20	0.10	0.30	2
Total	29.09	58.31	87.40	109

2.8 Issues and actions

The work-package is progressing well and is resulting in both peer-reviewed papers and local dissemination events. The work-package 2 team have also done well in presenting their work as a collective activity in events such as the Third European Agroforestry Conference.

3 Work package number 3

Work-package number	**3**
Work-package name	**Agroforestry for High Value Tree Systems**
Leader	Anastasia Pantera
Organisation	TEI Stereas Elladas (TEI)
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 3

Anastasia Pantera is leading this work package that focuses on intercropping or grazing in high value tree systems such as apple orchards, olive groves or walnut and chestnut trees. The key objective during months 13 to 30 has been to establish the protocols, initial the research and characterise the different systems (Table 3.1; Table 3.2).

Table 3.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 3 from month 12 to month 30 (indicated in orange), and plan until month 36 (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP3 High value tree agroforestry																									
T3.1 Establish PRD network (MS8) Completed in first period																									
T3.2 Characterise system (D3.7)													D												
T3.3 Identify testable innovations (MS9) (completed in first period) and establish protocols MS10)	M	M																							
T3.4 Test, analyse, interpret and cost innovation (MS11; D3.8)																					M				
T3.5 Evaluate innovations on-farm to produce guidelines (MS12; D3.9)																									
T3.6 Dissemination of results (MS13)																									
T3.7 Co-ordination of WP3																									

Table 3.2. Summary of the status of milestones and deliverables in work-package 3 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30) and remainder of project

Description	**Date**	**Status**
First progress period		
MS8 Establishment of PRD network	Aug 2014	Completed and on website
MS9 Identification of innovations to be tested	Dec 2014	Completed and on website
Second progress period		
MS10 Establishment research protocols	Jan 2015	Completed and on website
D3.7 System descriptions	Dec 2015	Completed and on website
Third reporting period (on-going)		
MS11 Report on studied innovations	Aug 2016	On-going
MS12 Report with guidelines	Aug 2017	Initial preparations
MS13 Dissemination of results	Dec 2017	On-going
D3.8 Guidelines to producers	Aug 2017	Initial preparations

3.1 Establish a participatory research and development network (completed)

Objective 3.1 was to identify examples of existing best practice, the key challenges, and possible innovations to address those challenges, within stakeholder working groups within this Participatory Research and Development Network (PDRN). As reported in the First Report, this was achieved by establishing 10 relevant stakeholder groups (Task 3.1), and confirmed by Milestone 8, which comprised an initial stakeholder report from each group (Table 3.3).

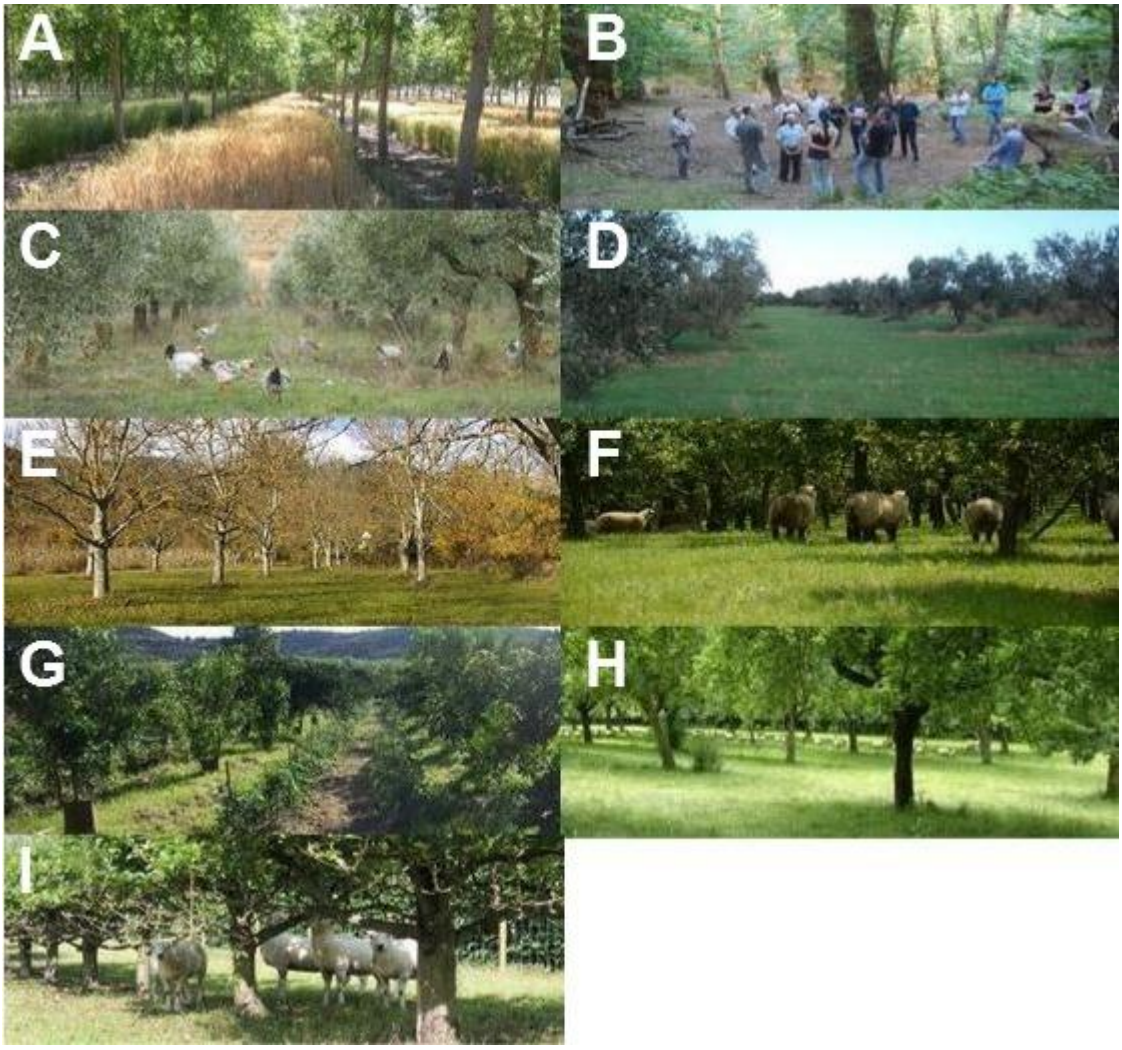


Figure 3.1. Agroforestry systems of high nature and cultural value across Europe; in A) Western Spain, B) Galicia, Spain, C) Italy, D) Greece, E) Greece, F) Normandy, France, G) Crete, Greece, H) England, UK and I) Northern Ireland, UK

Table 3.3. References for the ten stakeholder reports (Milestone 8) produced in work-package 3

Moreno G (2014). Initial Stakeholder Meeting Report Grazing and intercropping of plantation trees in Spain. 17 September 2014. 12 pp. Available online: http://www.agforward.eu/index.php/en/grazing-and-intercropping-of-plantation-trees-in-spain.html

Mosquera Losada R, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Rigueiro Rodríguez A (2014). Initial Stakeholder Meeting Report: Chestnut agroforestry in Galicia, Spain. 23 September 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/chestnut-agroforestry-in-galicia-spain.html

Rosati A (2014). Initial Stakeholder Meeting Report Intercropping and grazing of olive orchards in Italy. 6 August 2014. 7 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-and-grazing-of-olive-orchards-in-italy.html

Pantera A (2014). Initial Stakeholder Meeting Report: Intercropping of olive groves in Greece (Kassandreia). 20 October 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-olive-groves-in-greece.html

Pantera A (2014). Initial Stakeholder Meeting Report: Intercropping of olive groves in Greece (Molos). 20 October 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-olive-groves-in-greece.html

Pantera A (2014). Initial Stakeholder Meeting Report: Intercropping of Walnut Trees in Greece. 20 October 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-walnut-trees-in-greece.html

Pantera A (2014). Initial Stakeholder Meeting Report Intercropping of Orange Groves in Greece. 18 November 2014. 7 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-orange-groves-in-greece.html

Corroyer N (2014). Initial Stakeholder Meeting Report: Grazed Orchards in France. 1 December 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/grazed-orchards-in-france.html

Burgess PJ (2014). Initial Stakeholder Meeting Report: Grazed Orchards in the UK. 18 July 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/Grazed_Orchards.html

McAdam J (2014). Initial Stakeholder Meeting Report: Grazed orchards in Northern Ireland, UK. 4 December 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/grazed-orchards-in-northern-ireland-uk.html

3.2 Characterising the systems (completed)

Objective 3.2 was to describe the key inputs, outputs and ecosystem service flows for the selected systems. This has been a key focus of work (Task 3.2) during 2015. Each stakeholder group has produced a report (Table 3.4) which has been synthesised in a report (Deliverable 3.7) describing the components, structure and outputs of the systems.

Table 3.4. References for the ten system description reports which was used to produce Deliverable 3.7

Burgess PJ, Upson M, Graves A, Garcia de Jalon S (2016). System Report: Grazed Orchards in England and Wales. April 2016. 23 pp. http://www.agforward.eu/index.php/en/Grazed_Orchards.html

Corroyer N (2016). System Report: Grazed Orchards in France. January 2016. 15 pp. http://www.agforward.eu/index.php/en/grazed-orchards-in-france.html

McAdam J, Ward, F (2015). System Report: Grazed Orchards in Northern Ireland. November 2015. 12 pp. http://www.agforward.eu/index.php/en/grazed-orchards-in-northern-ireland-uk.html

Moreno G, López-Díaz ML, Bertomeu García M (2015). System Report: Silvopastoral Management for Quality Wood Production in Spain. September 2015. 16 pp. http://www.agforward.eu/index.php/en/grazing-and-intercropping-of-plantation-trees-in-spain.html

Fernández Lorenzo JL, Rigueiro Rodríguez A, Ferreiro Domínguez N, González Hernández P, Mosquera Losada MR (2016). System Report: Chestnut Agroforestry in Spain. January 2016. 13 pp. http://www.agforward.eu/index.php/en/chestnut-agroforestry-in-galicia-spain.html

Pantera A, Papadopoulos A, Kitsikopoulos D, Mantzanas K, Papanastasis V, Fotiadis G (2016a). System Report: Olive Agroforestry in Molos, Central Greece. January 2016. 9 pp. http://www.agforward.eu/index.php/en/intercropping-of-olive-groves-in-greece.html

Pantera A, Papadopoulos A, Kasselaki M, Papanastasis V, Mantzanas K, Fotiadis G (2016b). System Report: Agroforestry with Orange Groves in Crete, Greece. January 2016. 9 pp. http://www.agforward.eu/index.php/en/intercropping-of-orange-groves-in-greece.html

Mantzanas K, Papanastasis V, Pantera A, Papadopoulos A (2015). System Report: Olive Agroforestry in Kassandra, Chalkidiki, Greece. December 2015. 8 pp. http://www.agforward.eu/index.php/en/intercropping-of-olive-groves-in-greece.html

Rosati A, Mantovani D (2015). System Report: Intercropping of Olive Orchards in Italy. November 2015. 8 pp. http://www.agforward.eu/index.php/en/intercropping-and-grazing-of-olive-orchards-in-italy.html

van Lerberghe P, Malignier N (2016). System Report: Traditional Pollard Agroforestry in South-West France. May 2016. 11 pp. http://www.agforward.eu/index.php/en/bordure-trees-in-france-1375.html

Table 3.5. A synthesis report of the system descriptions for work-package 3 (Deliverable 3.7)

Pantera A, Burgess PJ, Corroyer N, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Graves A, Malignier N, McAdam J, Moreno G, Mosquera-Losada MR, Rigueiro Rodríguez A, Rosati A, Upson M, van Lerberghe P (2016). Agroforestry for High Value Trees: Synthesis of System Descriptions. Deliverable 3.7 (3.1) for EU FP7 Research Project: AGFORWARD 615320. June 2016. 10 pp. http://www.agforward.eu/index.php/en/describing-agroforestry-systems-with-high-value-trees-a-summary.html

3.3 Identify testable innovations and establish protocols (completed)

Objective 3.3 was to agree, within the PDRN, the key innovations or improvements in quantification that could promote the uptake of agroforestry involving high value tree systems. Agreement on the innovations to be tested (Task 3.3) was achieved with the completion of a report that was made available on the AGFORWARD website in January 2015 (Table 3.6).

Table 3.6. Reference for the report describing agroforestry innovations for high value tree systems

Pantera A, Burgess PJ, Corroyer N, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Graves AR, McAdam J, Moreno G, Mosquera Losada MR, Rigueiro Rodríguez A, Rosati A, Upson M (2015). Innovations to be examined for Agroforestry for High Value Tree Systems. Milestone 3.2 (MS 9) for EU FP7 Research Project: AGFORWARD 613520. 14 pp. 20 January 2015. http://www.agforward.eu/index.php/en/agroforestry-innovations-to-be-examined-for-high-value-tree-systems.html

During early 2015, each stakeholder group developed a research and development protocol. These went through a process of review by the work-package leader and each report was approved and uploaded to the AGFORWARD webpage by June 2015 (Table 3.7). During 2015, it was decided to report the research being completed on pollarded trees by APCA within work-package 3. Hence Table 3.7 includes the report by van Lerberghe and Malignier on traditional pollard agroforestry in south-west France. A synthesis report of the research and development protocols (Milestone 10) was produced in October 2015 (Table 3.8).

Table 3.7. Reports describing the research and development protocol for each group

García M, Moreno G (2015). Research and Development Protocol for Silvopastoral Management of High Value Timber Plantations in Spain. 20 March 2015. 5 pp. Available at: http://www.agforward.eu/index.php/en/grazing-and-intercropping-of-plantation-trees-in-spain.html
Corroyer N, Upson M (2015). Research and Development Protocol for Grazed Orchards in France. 26 February 2015. 5 pp. Available online: http://www.agforward.eu/index.php/en/grazed-orchards-in-france.html
Fernández Lorenzo JL, Rigueiro Rodríguez A, Ferreiro-Domínguez N, González-Hernández P, Burgess, PJ, Mosquera-Losada MR (2015). Research and Development Protocol for Chestnut Agroforestry in Spain. 15 June 2015. 7 pp. Available at: http://www.agforward.eu/index.php/en/chestnut-agroforestry-in-galicia-spain.html
Mantzanas K, Papanastasis V, Pantera A, Papadopoulos A (2015a). Research and Development Protocol for Olive Agroforestry in Kassandra, Chalkidiki, Greece. 26 March 2015. 8 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-olive-groves-in-greece.html
Mantzanas K, Papanastasis V, Pantera A, Papadopoulos A (2015b). Research and Development Protocol for Olive Agroforestry in Molos, Central Greece. 26 March 2015. 10 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-olive-groves-in-greece.html
McAdam J. Ward F (2015). Research and Development protocol for Grazed Orchards in Northern Ireland. 17 February 2015. 15 pp. Available online: http://www.agforward.eu/index.php/en/grazed-orchards-in-northern-ireland-uk.html
Moreno G, Lourdes López-Díaz M, Bertomeu García M (2015). Research and Development Protocol for Silvopastoral Management with Quality Wood Production in Spain. 20 March 2015. 10 pp. Available at: http://www.agforward.eu/index.php/en/grazing-and-intercropping-of-plantation-trees-in-spain.html

Pantera A, Papadopoulos A, Papanastasis V, Mantzanas K (2015). Research and Development Protocol for Agroforestry with Orange Groves in Crete, Greece. 26 March 2015. 5 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-of-orange-groves-in-greece.html

Rosati A, Mantovani D (2015). Research and Development Protocol for the Intercropping of Olive Orchards in Italy (2015). 11 March 2015. 9 pp. Available online: http://www.agforward.eu/index.php/en/intercropping-and-grazing-of-olive-orchards-in-italy.html

Upson M, Burgess PJ, Bevan T (2015). Research and Development protocol for Grazed Orchards in England and Wales. 11 February 2015. 17 pp. Available online: http://www.agforward.eu/index.php/en/Grazed_Orchards.html

van Lerberghe P, Malignier N (2015). Research and Development Protocol for Traditional Pollard Agroforestry in South-West France. 17 June 2015. 5 pp. Available online: http://www.agforward.eu/index.php/en/bordure-trees-in-france-1375.html

Table 3.8. A synthesis report of the research and development protocols for work-package 3 (Milestone 10) was produced in October 2015.

Pantera A, Mosquera Losada MR, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Rigueiro Rodríguez A, Corroyer N, McAdam J, Rosati A, Moreno G, Graves A, and Burgess PJ (2015). Synthesis of the Research and Development protocols related to Agroforestry for High Value Tree Systems. Milestone Report 10 (3.3 for EU FP7 Research Project: AGFORWARD 613520. (2 October 2015). 10 pp. http://www.agforward.eu/index.php/en/synthesis-of-the-research-and-development-protocols-related-to-agroforestry-with-high-value-trees.html

Three of the stakeholder groups (CRAN, AFBI, and APCA) are focusing on sheep grazing in apple orchards in France and the UK. Identified research topics include the creation of grazing management guidelines, the effect of grazing of the lower leaves on apple production, the development of a bio-economic model, and the impact of reduced leaf litter on apple scab infection. AFBI's research includes replicated experiments on sheep grazing (mixed breed) in dessert and cider orchards in comparison to normal management and mechanical mowing. CRAN is focusing on the effect of Shropshire sheep on the productivity of apple orchards.

Four of the stakeholder groups (TEI and CREA) are focusing on the intercropping and grazing of olive or citrus groves in Greece and Italy. Identified research topics include the interactions between olive trees and wheat compared to non-intercropped olives, best practices for growing wild asparagus and rearing poultry within olive groves, and the use of aromatic or leguminous intercrops.

Three of the stakeholder groups (UEX, USC, and TEI) are working with walnut or chestnut, either in Greece or Spain. Identified innovations include the use of legumes or aromatic species, and the use of sheep with walnut in Spain. The use of grafted plants of selected varieties of chestnut and techniques to increase mushroom production are also of interest in Spain.

ACTA are researching traditional pollard systems in south-west France. As part of the changes proposed in the Second Amendment to the General Agreement, it was agreed that ACTA could modify the purpose of an existing sub-contact to focus on "the evaluation of the total biomass production of pollarded trees compared to non-pollarded trees" (Table 10.7).

3.4 Test and analyse innovations to provide guidelines (On-going)

The participants of the work-package are now working on Objective 3.4 which is to implement the protocols, to develop and test the proposed innovations, and to analyse and interpret the results. This is being achieved through Task 3.4 of testing experimentally with replicates, and Task 3.5 the use of on-farm demonstrations. This will lead to a report (Milestone 11) describing the preliminary results of the innovations and wider perspectives due in August 2016.

3.5 Dissemination of results (on-going)

An on-going objective of the work-package (Objective 3.5) is to provide and promote guidelines for farmers on how to establish economically viable agroforestry practices within high value trees. Some of the dissemination activities are described in Table 9.8.

3.6 Co-ordination of the work in work-package 3

During the second reporting period, the work-package leader (Anastasia Pantera) has actively participated in Executive Board meetings and presented an update on the ongoing work for WP3 at the Second General Assembly meeting in Chania, Greece in June 2015, and she organised a WP3 workshop at the Third General Assembly meeting in Montpellier in May 2016.

3.7 Use of resources in work-package 3

At the end of June 2016, 77.09 person months had been allocated to work-package 3, equivalent to 68% of the total (Table 3.9). This is broadly in line with expectations.

Table 3.9. Person-month inputs to work-package 3 for First Reporting Period (Jan – Dec 2014), and Second Reporting Period (Jan 2015-June 2016)

Organisation	First period (Jan-Dec 2014)	Second period (Jan 2015-Jun 2016)	Sub-total	Project budget
CREA	5.25	16.25	21.50	28.0
TEI	3.92	6.93	10.85	23.0
Cranfield	2.70	7.88	10.58	12.0
USC	1.80	9.70	11.50	12.0
UEX	2.05	5.10	7.15	8.0
ORC	1.34	0.00	1.34	6.0
FDEA	0.18	0.14	0.32	6.0
AFBI[a]	**2.53**	2.51	5.04	5.5
AFAF	0.41	1.48	1.89	3.5
ISA	0.25	1.69	1.94	3.0
APCA	0.68	1.50	2.18	3.0
EURAF	0.20	0.30	0.50	2.0
ACTA	0.44	1.86	2.30	1.0
Total	21.75	55.34	77.09	113.0

[a]: The WP3 total for AFBI has been corrected from 2.09 to 2.53 for the first period.

3.8 Issues and actions

The work-package seems to be progressing well and there are no significant issues or actions to report.

4 Work package number 4

Work-package number	**4**
Work-package name	**Agroforestry for Arable Farmers**
Leader	Jaconette Mirck
Organisation	Brandenburg University of Technology Cottbus-Senftenberg
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 4

The focus of this work-package, led by Jaconette Mirck, is to develop innovations that will promote agroforestry for arable farmers. The first periodic report highlighted the establishment of the participatory research and development network, the identification of testable innovations (Table 4.1) and the completion of two milestones (Table 4.2). The second reporting period includes the development of research protocols, system descriptions, and the implementation of the protocols.

Table 4.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 4 for month 12 to month 30 (indicated in orange), and plan for the next six months (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP4																									
T4.1 Establish PRD network (MS14)																									
T4.2 Characterise system (D4.10)													D												
T4.3 Identify innovations (MS15) and establish protocols MS16)	M	M																							
T4.4 Test, analyse, interpret and cost innovation (MS17; D4.11)																					M				
T4.5 Evaluate innovations to produce guidelines (MS18; D4.12)																									
T4.6 Disseminate results (MS19)																									
T4.7 Co-ordination of WP4																									

Table 4.2. Summary of the status of milestones and deliverables in work-package 4 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	Date	Status
First reporting period		
MS14 Establishment of PRD network	Aug 2014	Completed and on website
MS15 Identification of innovations to be tested	Dec 2014	Completed and on website
Second reporting period		
MS16 Establishment research protocols	Jan 2015	Completed and on website
D4.10 System descriptions	Dec 2015	Completed and on website
Third reporting period (on-going)		
MS11 Report on studied innovations	Aug 2016	On-going
MS12 Report with guidelines	Aug 2017	Initial preparations
MS13 Dissemination of results	Dec 2017	On-going
D4.11 Guidelines to producers	Aug 2017	Initial preparations

4.1 Establish a participatory research and development network (completed)

Objective 4.1 was to identify examples of existing best practice, the key challenges, and possible innovations to address those challenges, within stakeholder working groups within a Participatory Research and Development Network (PRDN). As reported in the first periodic report, this was achieved by establishing (Task 4.1) 13 stakeholder groups (Figure 4.1). Spain, Southern France and the UK developed two stakeholder working groups.

Figure 4.1. Silvoarable systems across Europe; in A) Spain, B) Italy, C) Western France, D) UK, E) Switzerland, F) Southern France, G) Greece, H) Western France, I) Germany and J) Hungary

As reported in the First Progress Report, each stakeholder group produced an initial stakeholder report which comprised Milestone 14 (Table 4.3).

Table 4.3. References for the 13 stakeholder reports comprising Milestone 14

Cirou E, Hannachi Y (2014). Initial Stakeholder Meeting Report Agroforestry for Arable Farmers in Western France. (Ed. PJ Burgess). 14 November 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-arable-farmers-in-western-france.html

Gosme M (2014). Initial Stakeholder Meeting Report: Mediterranean Silvoarable Systems in France. 8 October 2014. 12 pp. Available online: http://www.agforward.eu/index.php/en/mediterranean-silvoarable-systems-in-france.html

Jäger M, Herzog F (2014). Initial Stakeholder Meeting Report Silvoarable systems with fruit and high value timber trees in Switzerland. 11 November 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/integrating-trees-with-arable-crops-switzerland.html

Malignier N, Canet A, van Lerberghe P (2014a). Initial Stakeholder Meeting Report Agroforestry for Arable Farmers in the South-West of France. 23 December 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-arable-farmers-in-south-west-france.html

Malignier N, Canet A, van Lerberghe P (2014b). Initial Stakeholder Meeting Report "Bordure" Trees in France. 28 December 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/bordure-trees-in-france.html

Mosquera Losada MR, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Rigueiro Rodríguez A (2014). Initial Stakeholder Meeting Report Silvoarable Systems in Spain. 29 October 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/silvoarable-systems-in-spain.html

Moreno G (2014). Initial Stakeholder Meeting Report Grazing and intercropping of plantation trees in Spain. 17 September 2014. 12 pp. Available online: http://www.agforward.eu/index.php/en/grazing-and-intercropping-of-plantation-trees-in-spain.html

Pantera A (2014). Initial Stakeholder Meeting Report: Trees with arable crops and grassland in Greece. 20 October 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/trees-with-arable-crops-and-grassland-in-greece.html

Pisanelli A, Camilli F, Dalla Valle C, Paris P (2014). Initial Stakeholder Meeting Report: Trees for timber intercropped with cereals in Italy. 7 October 2014. 6 pp. Available online: http://www.agforward.eu/index.php/en/trees-for-timber-intercropped-with-cereals-445.html

Smith J, Wolfe M, Crossland M, Howlett S (2014). Initial Stakeholder Meeting Report: Silvoarable Agroforestry in the UK. 21 November 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/silvoarable-agroforestry-in-the-uk.html

Tsonkova P, Mirck J (2014). Initial Stakeholder Report: Alley Cropping Systems in Germany. 19 September 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/alley-cropping-systems-in-germany.html

Vityi, A (2014). Initial Stakeholder Meeting Report: Alley Cropping Systems in Hungary. 23 October 2014. 11 pp. Available online: http://www.agforward.eu/index.php/en/alley-cropping-systems-in-hungary.html

Wartelle R (2014). Initial Stakeholder Meeting Report Agroforestry for Arable Farmers in Northern France. (Ed PJ Burgess). 16 December 2014. 10 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-arable-farmers-in-northern-france.html

4.2 Characterising the systems (completed)

Objective 4.2 was to describe the key inputs, outputs and ecosystem service flows for the selected systems. This has been a key focus of work (Task 4.2) during 2015 and the first half of 2016. Each stakeholder group produced a system report (Table 4.4) which is available on-line. The work-package 4 leader, Jaconette Mirck, has synthesised the report to create Deliverable 4.10 (Table 4.5).

Table 4.4. Thirteen system reports focused on agroforestry for arable systems provide the basis for Deliverable 4.10

Gosme M and Meziere D (2016). System Report: Durum Wheat Production in Agroforestry Systems in France. 18 January 2016. 12 pp. Available online: http://agforward.eu/index.php/en/mediterranean-silvoarable-systems-in-france.html

Mantzanas K, Papanastasis V, Pantera A, Papadopoulos A (2016). Systems Description: Silvoarable Agroforestry in Greece. 10 February 2016. 7 pp. Available online: http://agforward.eu/index.php/en/trees-with-arable-crops-and-grassland-in-greece.html

Meziere D and Gosme M (2016). System Report: Weed survey in Mediterranean Silvoarable Group in France. 15 January 2016. 9 pp. Available online: http://agforward.eu/index.php/en/mediterranean-silvoarable-systems-in-france.html

Mirck J, Kanzler M, Quinckenstein A (2016). System Report: Alley Cropping in Germany. 30 October 2015. 11 pp. Available online: http://agforward.eu/index.php/en/alley-cropping-systems-in-germany.html

Moreno G, Arenas G, Lopez-Diaz ML, Bertomeu M, Caceres Y, and Juarez E (2016). System Report: Cereal Production beneath Walnut in Spain. 1 October 2015. 12 pp. Available online: http://www.agforward.eu/index.php/en/silvoarable-systems-in-spain.html

Mosquera Losada MR, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Rigueiro Rodríguez A (2016). System Report: Silvoarable Systems in Galicia, Spain. 13 January 2016. 11 pp. Available online: http://www.agforward.eu/index.php/en/silvoarable-systems-in-spain.html

Paris P, Laureti M, Ciolfi M and dalla Valle C (2016). System Report: Trees for timber with Arable Crops in Italy. 18 January 2016. 17 pp. Available online: http://agforward.eu/index.php/en/trees-for-timber-intercropped-with-cereals-445.html

Petrillo M and Herzog F (2016). System Report: Silvoarable Agroforestry in Switzerland. 12 February 2016. 12 pp. Available online: http://agforward.eu/index.php/en/integrating-trees-with-arable-crops-switzerland.html

Smith J (2016). System Report: Silvoarable Agroforestry in the UK I. 12 January 2016. 17 pp. Available online: http://agforward.eu/index.php/en/silvoarable-agroforestry-in-the-uk.html

Smith J and Venot C (2016). System Report: Silvoarable Agroforestry in the UK II. 27 October 2015. 13 pp. Available online: http://agforward.eu/index.php/en/silvoarable-agroforestry-in-the-uk.html

Van Lerberghe P, Malignier N, Hannachi Y (2016). System description: Walnut Trees on Arable Land in France. 18 January 2016. 10 pp. Available online: http://agforward.eu/index.php/en/agroforestry-for-arable-farmers-in-western-france.html

Vityi A, Marosvoeglyi B, Kiss A, Schettrer P (2016). System report: Alley Cropping in Hungary. 30 November 2015. 11 pp. Available online: http://agforward.eu/index.php/en/alley-cropping-systems-in-hungary.html

Wartelle R, Meziere D, Gosme M, La-Laurent L (2016). System report: Weed Survey in Northern Silvoarable Group in France. 15 January 2016. 8 pp. Available online: http://www.agforward.eu/index.php/en/mediterranean-silvoarable-systems-in-france.html

Table 4.5. A synthesis report of the system descriptions for work-package 4 (Deliverable 4.10)

Mirck, J. (2016). Agroforestry for Arable Systems: Synthesis of System Descriptions. Deliverable 4.10 (4.1) for EU FP7 Research Project: AGFORWARD 613520. 15 pp. 13 May 2016. http://www.agforward.eu/index.php/en/describing-agroforestry-systems-for-arable-farmers-a-summary.html

4.3 Identify testable innovations and establish protocols (Completed)

Objective 4.3 was to agree, within the PDRN, the key innovations or improvements in quantification that could promote the uptake of agroforestry involving arable systems. As reported in the First Progress Report, the innovations to be tested were reviewed and reported and placed on the AGFORWARD website in January 2015 (Milestone 15; Table 4.6).

Table 4.6. Report (Milestone 15) describing innovations for agroforestry for arable farmers

Mirck J, Cirou E, Camilli F, Crossland M, Dalla Valle C, Fernandez Lorenzo JL, Ferreiro-Dominguez Lorenzo N, Gonzalez-Hernandez P, Gosme M, Hannachi Y, Herzog F, Howlett S, Jäger M, Mosquera Losada MR, Moreno G, Pantera A, Paris P, Pisanelli A, Rigueiro Rodriguez A, Smith J, Tsonkova P, Vityi A, Wartelle R, Wolfe M, Burgess PJ (2014). Agroforestry Innovations to be evaluated for Arable Farmers. Milestone 4.2 (MS15) for EU FP7 Research Project: AGFORWARD 613520. 11 pp. 20 January 2015. http://www.agforward.eu/index.php/en/agroforestry-innovations-to-be-evaluated-for-arable-farmers.html

Between January and June 2015, each stakeholder group completed a research and development protocol for each system. Each report followed a review process before approval and being uploaded to the AGFORWARD website. In total 13 protocols were established across 10 groups (Table 4.7). Two research protocols were created for the groups in the UK (Fradgley and Smith 2015 and Smith 2015), Spain (Moreno 2015 and Mosquera Losada et al. 2015), and for the Mediterranean silvoarable group in France (Gosme and Desclaux 2015 and Meziere 2015). For consistency of presentation, it was decided to move the ACTA-led stakeholder group which focused on “bordure” trees in France (Malignier et al. 2014b in Table 4.3) to work-package 3. Because of the similarity in interest, it was also agreed that the stakeholder groups focused on silvoarable agroforestry in South West France and Western France should merge.

The research protocols within work-package 4 include crop and tree measurements, weed management and tree protection, pests and diseases, shade tolerance, soil health, water use and root distribution, biodiversity, socio-economic issues and system design. A report (Milestone 16) summarizing the research protocols was reviewed and placed on the AGFORWARD website in October 2015 (Table 4.8).

Table 4.7. Reports (Milestone 16) describing the research and development protocol for each group

Dalla Valle C, Paris P (2015). Research and Development Protocol for Timber Trees intercropped with Cereals in Italy. 2 April 2015. 9 pp. Available online: http://agforward.eu/index.php/en/trees-for-timber-intercropped-with-cereals-445.html
Fradgley N, Smith J (2015). Research and Development Protocol for Silvoarable Agroforestry in the UK. 9 April 2015. 8 pp. Available online: http://agforward.eu/index.php/en/silvoarable-

agroforestry-in-the-uk.html
Gosme M, Desclaux D (2015). Research and Development Protocol for the Participatory Plant Breeding of Durum Wheat for Mediterranean Agroforestry Group. 2 March 2015. 13 pp. Available online: http://agforward.eu/index.php/en/mediterranean-silvoarable-systems-in-france.html
Herzog F, Jäger M, (2015). Research and Development Protocol for Integrating Trees with Arable Crops, Switzerland. 9 March 2015. 13 pp. Available online: http://agforward.eu/index.php/en/integrating-trees-with-arable-crops-switzerland.html
Mantzanas K, Papanastasis V, Pantera A, Papadopoulos A (2015). Research and Development Protocol for Silvoarable Agroforestry Group in Greece. 30 March 2015. 6 pp. Available online: http://agforward.eu/index.php/en/trees-with-arable-crops-and-grassland-in-greece.html
Meziere D (2015). Research and Development Protocol for Weed Management in Mediterranean Silvoarable Group in France. 9 June 2015. 9 pp. Available online: http://agforward.eu/index.php/en/mediterranean-silvoarable-systems-in-france.html
Mirck J, Quickenstein A (2015). Research and Development Protocol for Alley Cropping in Germany. 9 March 2015. 11 pp. Available online: http://agforward.eu/index.php/en/alley-cropping-systems-in-germany.html
Moreno G (2015). Research and Development Protocol for Cereal Production beneath Walnut in Spain. 20 March 2015. 7 pp. Available online: http://www.agforward.eu/index.php/en/silvoarable-systems-in-spain.html
Mosquera Losada MR, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Rigueiro Rodríguez A (2015). Research and Development Protocol for Silvoarable Systems in Galicia, Spain. 28 March 2015. 6 pp Available online: http://agforward.eu/index.php/en/silvoarable-systems-in-spain.html
Smith J (2015). Research and Development Protocol for Silvoarable Agroforestry in the UK (part 2). 23 March 2015. 6 pp. Available online: http://www.agforward.eu/index.php/en/silvoarable-agroforestry-in-the-uk.html
van Lerberghe P, Malignier N, Cirou E (2015). Research and Development Protocol for Agroforestry for Arable Farmers in Western France. 17 August 2015. 6 pp. Available online: http://agforward.eu/index.php/en/agroforestry-for-arable-farmers-in-western-france.html
Vityi, A, Marosvolgyi B, Kiss A, Schettrer P (2015). Research and Development Protocol for Alley Cropping in Hungary. 24 March 2015. 9 pp. Available online: http://agforward.eu/index.php/en/alley-cropping-systems-in-hungary.html
Wartelle R (2015). Research and Development Protocol for Agroforestry for Arable Farmers in Northern France. 17 August 2015. 6 pp. Available online: http://agforward.eu/index.php/en/agroforestry-for-arable-farmers-in-northern-france.html

Table 4.8. Report (Milestone 16) summarizing the research and development protocols for arable farmers

Mirck J, Burgess PJ (2015). Synthesis of the Research and Development protocols related to Agroforestry for Arable Systems. Milestone Report 16 (4.3 for EU FP7 Research Project: AGFORWARD 613520. (1 October 2015). 13 pp. http://www.agforward.eu/index.php/en/agroforestry-innovations-to-be-evaluated-for-arable-farmers.html

4.4 Test and analyse innovations to provide guidelines (started)

During 2015 and 2016, the participants of the work-package are focusing on Objective 4.4 which is to implement the protocols, to develop and test the proposed innovations, and to analyse and interpret the results. This is being achieved through experiments (Task 4.4) and on-farm trials (Task

4.5). This will lead to a report (Milestone 17) describing the preliminary results of the innovations and wider perspectives due in August 2016.

Diascope, within INRA, is mostly engaged in field experiments about Durum wheat breeding for shade tolerance and adaptation in association with olive, almond, and poplar trees. The cultivars selected from the initial pot experiment in July 2014 were sown in field trials at the INRA experimental farm (UE DiaScope) and within two farm-based trials at Restinclières and Caizergues. A wide genetic variability including 40 varieties (genetic resources or improved varieties) has been evaluated.

The INRA SYSTEM unit at Montpellier is also involved with the field experiments on the productivity of wheat intercrops in walnut tree based agroforestry systems, weed infestation of silvoarable agroforestry plots, and management of trees by pollarding.

UMR SYSTEM managed one of the durum wheat trials comparing varieties in agroforestry conditions, in order to screen for varieties adapted to agroforestry. Twelve varieties were tested in shaded (30 m high poplars) and unshaded (2-3 m high Sorb trees) conditions. Each variety was repeated three times in each condition, at different distances from the tree line. Crop growth was followed from April to June (plant height, leaf area index, green surface, growth stage), and yield components were measured (number of plants/m^2, spikes/m^2, seeds/spike, seed weight), as well as weed, straw and seed biomass. At the same time, microclimatic variables were measured in the two conditions (air temperature, PAR, relative humidity, leaf temperature) throughout the growing season and hemispherical photographs were taken at three dates in each microplot, in order to characterize the environment of the plants. Data are currently being analysed. Regarding the weed surveys, monitoring took place during two periods (a third one is scheduled in autumn) according to the provided protocol (http://agforward.eu/index.php/fr/systemes-silvoarables-mediterraneens-en-france.html?file=files/agforward/documents/WP4_F_alleycropping_weed_protocol.pdf) and the analysis of data is in progress.

Experimental and trial work has also started at other sites. For example scientists at ORC in the UK are collecting weather data at an experimental site at “Wakelyns” and have collected the yields of short rotation coppice willow and hazel. VEN in Italy is working with a farmer who has implemented an agroforestry system, with support from the Regional Rural Developing Programme (Veneto RDP, 2007-13, measure n. 222), and TEI has already established an experiment at Sisani, Voio, Western Macedonia in Greece.

In Germany, BTU is collecting weather and stratified crop data at an experimental site close to Forst, Lausitz where tree and crop yields have been measured for the four years. Detailed competition investigations between a sugar beet crop and fast growing trees took place in 2015. A similar experiment is being repeated in 2016, but with winter wheat as the crop. The objectives to be addressed are: (i) to assess root distribution of trees and crops within the alley cropping system; (ii) to study moisture availability to the crop in a transect at different distance from the hedgerows; (iii) to estimate yield differences between yields in agroforestry and conventional agricultural systems, and (iv) to assess how agroforestry systems influence soil fertility.

4.5 Dissemination of results (on-going)

An on-going objective of the work-package (Objective 4.5) is to provide and promote guidelines for farmers on how to establish economically viable agroforestry practices in arable systems (with work-package 9). IDF (third-party to ACTA) working with AFAF has started to collate some of the best technical practices for agroforestry in arable systems in preparation for the technical guidelines. VEN has also established a database of regional and national stakeholders interested in agroforestry.

4.6 Use of resources in work-package 4

At the end of June 2016, 127.35 person months had been allocated to work-package 4, equivalent to 98% of the total (Table 4.9). INRA has allocated substantially more person months to work-package 4 than indicated in the initial budget. As agreed in the initial contract, INRA (unlike other partners) has funding arrangements that allows it to allocate more person months and more resources to work-packages than will be directly funded by the European Commission. INRA has confirmed that their expenditure in excess of the eligible financial budget within AGFORWARD and the exceedance of the work-person budget will not undermine their capacity to deliver project milestones and deliverables in the final period of the project.

Table 4.9. Person-month inputs to work-package 4 for First Reporting Period (Jan – Dec 2014), and Second Reporting Period (Jan 2015-June 2016)

Organisation	First period (Jan-Dec 2014)	Second period (Jan 2015 to Jun 2016)	Sub-total	Project total
INRA	8.19	42.37	50.56	25
BTU	6.69	13.36	20.05	32
ORC	3.90	9.48	13.38	12
NYME	2.13	3.73	5.86	9
USC	1.80	7.10	8.90	9
UEX	1.65	5.40	7.05	9
CNR	1.50	2.25	3.75	6
TEI	1.48	3.13	4.61	6
APCA	1.29	1.55	2.84	6
VEN	0.66	1.18	1.84	2
FDEA	0.49	0.32	0.81	4
ACTA (IDF)	0.34	2.65	2.99	1
ISA	0.25	1.61	1.86	3
AFAF	0.24	2.04	2.28	3.5
EURAF	0.20	0.30	0.50	2
CRAN	0.00	0.07	0.07	1
Total	**30.81**	**96.54**	**127.35**	**130.50**

4.7 Issues and actions

The work-package seems to be progressing well and there are no significant issues or actions to report.

5 Work package number 5

Work package number	**5**
Work package name	**Agroforestry for Livestock Farmers**
Leader	John E Hermansen
Organisation	Aarhus University
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 5

The focus of this work-package is agroforestry practices appropriate for livestock farmers. During the second reporting period the key objective was to finalize the identification of innovations to be evaluated for livestock farmers, to establish the corresponding research protocols and to start the tests, and to characterise the relevant agroforestry systems (Table 5.1; Table 5.2).

Table 5.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 5 for month 12 to month 30 (indicated in orange), and plan for the next six months (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP5 Agroforestry for livestock																									
T5.1 Establish PRD network (MS20) Completed in first period																									
T5.2 Characterise system (D5.13)													D												
T5.3 Identify innovations (MS21) (completed in first period) and establish protocols MS22)	M	M																							
T5.4 Test, analyse, interpret and cost innovation (MS23; D5.14)																					M				
T5.5 Evaluate innovations to produce guidelines (MS24; D5.15)																									
T5.6 Disseminate results (MS25)																									
T5.7 Co-ordination of WP5																									

Table 5.2. Summary of the status of milestones and deliverables in work-package 5 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	**Date due**	**Status**
First reporting period		
MS20 Establishment of PRD network	Aug 2014	Completed
MS21 Identification of innovations to be tested	Dec 2014	Completed
Second reporting period		
MS22 Establishment of research protocols	Jan 2015	Completed
D5.13 Systems description	Jan 2016	Completed
Third reporting period (on-going)		
MS23 Preliminary results discussed with stakeholders	Aug 2016	Ongoing
MS24 Report of results of tested innovation	Feb 2017	Ongoing
MS25 Dissemination of results	Dec 2017	On-going
D5.14 Guidelines to producers	Aug 2017	Initial preparations

5.1 Establish a participatory research and development network (completed)

Objective 5.1 was to identify examples of existing best practice, the key challenges, and possible innovations within stakeholder working groups. This objective was achieved by establishing a network (Task 5.1) comprising groups related to the use of agroforestry for i) poultry (UK, Netherlands, Denmark), ii) ruminants (UK, France, Netherland), and iii) pigs (Denmark, Italy and Spain). As reported in the First Progress Report, 10 stakeholder reports were produced as established by Milestone 20 (Table 5.3).

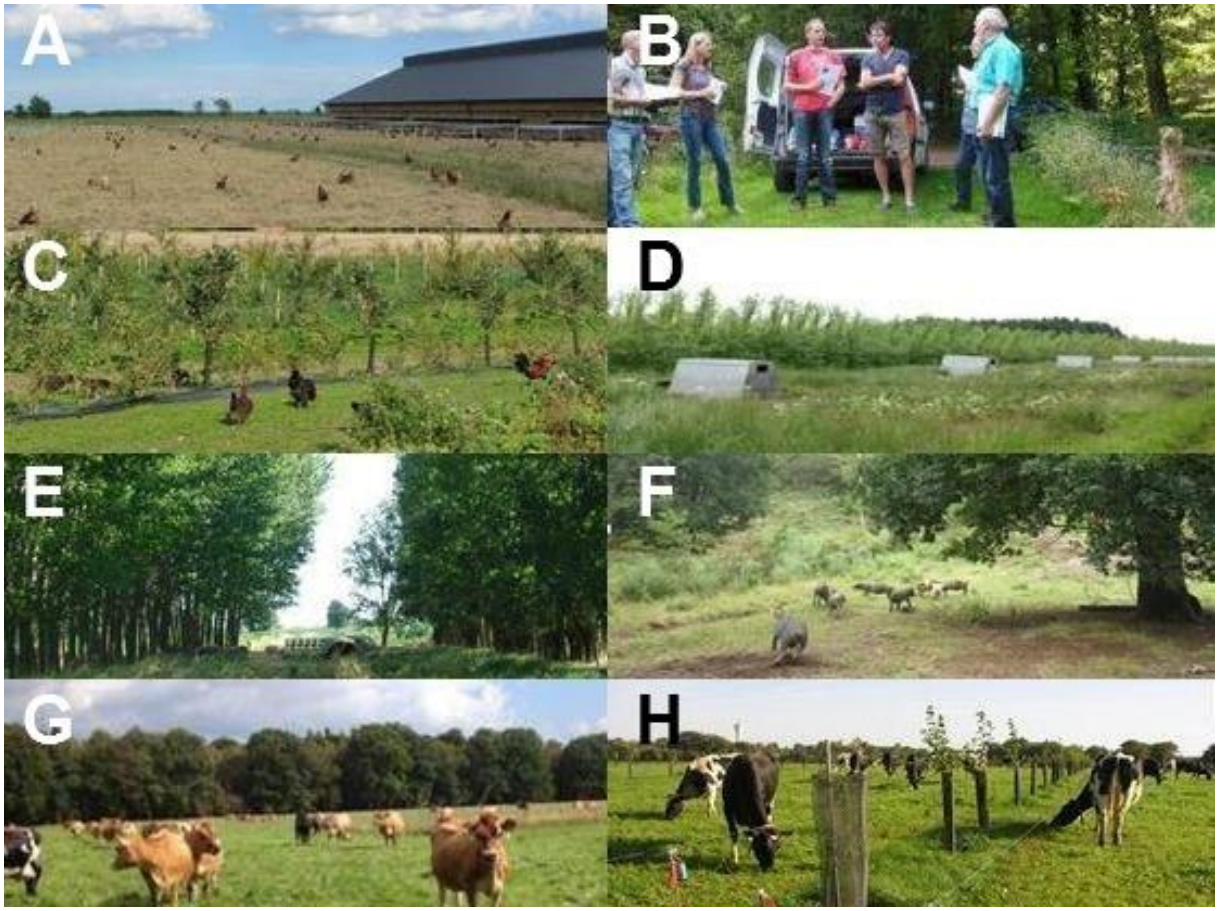


Figure 5.1. Agroforestry for poultry systems in A) the UK, B) the Netherlands and C) Italy, and agroforestry systems for pigs in D) Denmark, E) Italy, and F) Spain, and livestock systems in G) the Netherlands, and H) France

Table 5.3. Ten stakeholder reports comprise Milestone 20

Bestman, M. (2014). Initial Stakeholder Meeting Report: Agroforestry for poultry systems in the Netherlands (9 July meeting). 25 September 2014. 5 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-poultry-systems-in-the-netherlands.html
Bestman, M. (2014). Initial Stakeholder Meeting Report: Agroforestry for poultry systems in the Netherlands (18 September meeting). 25 September 2014. 7 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-poultry-systems-in-the-netherlands.html
Smith J, Vieweger A, Zaralis K (2014). Initial Stakeholder Meeting Report: Woodland Eggs in the UK. 3 July 2014. 6 pp. Available online: http://www.agforward.eu/index.php/en/Poultry-systemUK.html
Smith J, Vieweger A, Zaralis K (2014). Initial Stakeholder Meeting Report: Woodland Poultry in the UK. 16 May 2014. 5 pp. Available online: http://www.agforward.eu/index.php/en/Poultry-systemUK.html
Kongsted AG (2014). Initial Stakeholder Meeting Report: Agroforestry for organic poultry and pig production in Denmark. 29 October 2014. 7 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-organic-poultry-and-pig-production-in-denmark-583.html
Kongsted AG (2014). Initial Stakeholder Meeting Report Free-range pigs integrated with energy crops in Denmark. 4 September 2014. 7 pp. Available online: http://www.agforward.eu/index.php/en/free-range-pigs-integrated-with-energy-crops.html
Bondesan V (2014). Initial Stakeholder Meeting Report: Free-range Pigs with Energy Crops in Veneto, Italy. (Ed. P Burgess). 21 November 2014. 8 pp. Available online: http://www.agforward.eu/index.php/en/free-range-pigs-with-energy-crops-italy.html
Mosquera-Losada MR, Ferreiro-Domínguez N, Fernández Lorenzo JL, González-Hernández P, Rigueiro Rodríguez A (2014). Initial Stakeholder Meeting Report: Agroforestry with Pigs, Galicia, Spain. 25 September 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-with-pigs-in-galicia-spain.html
Pottier E (2014). Initial Stakeholder Meeting Report: Agroforestry with Ruminants in France. (Ed PJ Burgess). 10 November 2014. 9 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-with-ruminants-in-france.html
Luske B (2014). Initial Stakeholder Meeting Report: Fodder trees for cattle and goats in the Netherlands. 6 October 2014. 6 pp. Available online: http://www.agforward.eu/index.php/en/fodder-trees-for-cattle-and-goats-in-the-netherlands.html

5.2 Characterising the systems (completed)

Objective 5.2 was to describe the key inputs, outputs and ecosystem service flows for the selected systems. This was the key focus of work (Task 5.2) during 2015 culminating in eight reports (Table 5.4), followed by a concise synthesis report (Deliverable 5.13; Table 5.5). An overview of the systems is provided in Table 5.6.

Table 5.4. Eight system description reports focused on agroforestry for livestock farmers provided the basis for Deliverable 5.13

Bestman M (2015). System Report: Agroforestry for Organic Egg Production in the Netherlands. November 2015. 9 pp. http://www.agforward.eu/index.php/en/agroforestry-for-poultry-systems-in-the-netherlands.html

Bondesan V (2015). System Report: Agroforestry for Free-Range Pig Production in Veneto Region, Italy. December 2015. 16 pp. http://www.agforward.eu/index.php/en/free-range-pigs-with-energy-crops-italy.html

Kongsted AG, Hermansen JE (2015). System Report: Agroforestry for Free-Range Pig Production in Denmark. October 2015. 7 pp. http://www.agforward.eu/index.php/en/free-range-pigs-integrated-with-energy-crops.html

Luske B (2015). System Report: Agroforestry for Ruminants in the Netherlands. November 2015. 9 pp. http://www.agforward.eu/index.php/en/fodder-trees-for-cattle-and-goats-in-the-netherlands.html

Mosquera-Losada MR, Domingues NF, Fernandez-Lorenzo JL, Gonzales-Hernandez P, Rodrigues AR (2016). System Report: Fodder Tree Evaluation in Galicia, Spain. January 2016. 8 pp. http://www.agforward.eu/index.php/en/agroforestry-with-pigs-in-galicia-spain.html

Novak S, Emile J-C (2015). System Report: Agroforestry for Ruminants in France. December 2015. 13 pp. http://www.agforward.eu/index.php/en/agroforestry-with-ruminants-in-france.html

Smith J, Gerrard C (2015). System Report: Agroforestry for Ruminants in England. October 2015. 12 pp. http://www.agforward.eu/index.php/en/agroforestry-with-ruminants-uk.html

Smith J, Gerrard C, Westaway S (2016). System Report: Poultry Agroforestry in the UK. February 2016. 11 pp. http://www.agforward.eu/index.php/en/Poultry-systemUK.html

Table 5.5. A synthesis report of the system descriptions for work-package 5 (Deliverable 5.13),

Hermansen JE (2016). Agroforestry for Livestock Farmers: Synthesis of System Descriptions. Deliverable 5.13 (5.1) for EU FP7 Research Project: AGFORWARD 613520. 6 pp. http://www.agforward.eu/index.php/en/describing-agroforestry-systems-for-livestock-farmers-a-summary.html

Table 5.6. Overview of livestock agroforestry systems and their key characteristics

Case, country and reference	Tree species	Ecosystem services			
		Provisioning		Regulating	Cultural
		Livestock products	Tree products		
Ruminants					
France (Novak & Emile 2015)	Ash, white mulberry, walnut, wild cherry	Milk, meat	Feed (leaves), wood chips (bioenergy) timber	Shade and shelter for livestock, nutrient cycling, nitrogen-fixation	Diversified landscape
The Netherlands (Luske 2015)	Willow, alder	Milk	Feed (leaves), wood chips (bioenergy)	Drainage, shade, N-fixation, biodiversity	Jobs, diversified landscape
UK (Smith & Gerrard 2015)	Willow, poplar, hazel, alder	Meat, milk	Feed (leaves), wood chips (bioenergy)	Shade and shelter for livestock, nutrient cycling, nitrogen-fixation , functional biodiversity	Jobs, diversified landscape
Poultry					
Netherlands (Bestman 2015)	Fruit trees, willow	Egg	Fruit (table and juice)	Shelter for hens, reduce nutrient leaching, biodiversity	Diversified jobs
UK (Smith el al. 2016)	Native broadleaves and conifers	Egg	Wood chips for bioenergy	Shade and shelter for hens, functional biodiversity, N-fixation	Jobs, diversified landscape
Pigs					
Italy (Bondesan 2015)	Poplar, willow, chestnut	Pork meat	Timber, woodchips for energy or for bedding-rooting material	Reduce risk of nutrient leaching, shade and shelter for pigs	Jobs (alleviate abandonment of land), diversified landscape
Spain (Mosquera-Losada et al. 2016)	Mulberry	Pork meat	Feed (proteins)	Reduce temperature fluctuations, carbon sequestration, biodiversity	Jobs
Denmark (Kongsted & Hermansen 2015)	Poplar and willow	Pork meat	Woodchips for energy or for bedding-rooting material	Reduce risk of nutrient leaching, shade and shelter for pigs	Diversified landscape

5.3 Identify testable innovations and establish protocols (completed)

Objective 5.3 is to agree, within the PDRN, the key innovations or improvements in quantification that could promote the uptake of agroforestry by livestock farmers. This has been achieved (Task 5.3) by agreeing the innovations to be tested by each group either at experimental sites or on-farm. Milestone 21 comprising a report of the innovations to be tested was due in December 2014, and was placed on the AGFORWARD website in January 2015 (Table 5.7).

A key focus between January and June 2015 was the completion of a research and development protocol for each group. In total nine protocols were established and each report followed a review process before being placed on the website (Table 5.8). A report synthesising the protocols has also been produced (Table 5.9).

Table 5.7. Reference for the reports describing innovations for agroforestry for livestock farmers (Milestone 21)

Hermansen JE, Kongsted AG, Bestman M, Bondesan V, Gonzalez P, Luske B, McAdam J, Mosquera-Losada MR, Novak S, Pottier E, Smith J, van Eekeren N, Vonk M, Burgess PJ (2015). Agroforestry Innovations to be evaluated for Livestock Farmers. Milestone 5.2 (MS 21) for EU FP7 Research Project: AGFORWARD 613520. 10 pp. 27 January 2015. Available online: http://www.agforward.eu/index.php/en/agroforestry-innovations-to-be-evaluated-for-livestock-farmers.html

Table 5.8. Reports (Milestone 22) describing the research and development protocol for each group

Bestman M (2015) Research and Development Protocol for Agroforestry for Free-range Egg and Poultry Production in the Netherlands. 27 March 2015. 5pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-for-poultry-systems-in-the-netherlands.html
Bondesan V (2015). Research and Development Protocol for Agroforestry for Free-Range Pig Production in Veneto Region, Italy. 24 March 2015. 7 pp. Available online: http://www.agforward.eu/index.php/en/free-range-pigs-with-energy-crops-italy.html
Hermansen JE, Kongsted AG, Bestman M, Bondesan V, Gonzalez P, Luske B, McAdam J, Mosquera-Losada MR, Novak S, Pottier E, Smith J, van Eekeren N, Vonk M, Burgess PJ (2015). Agroforestry Innovations to be evaluated for Livestock Farmers. Milestone 5.2 (MS 21) for EU FP7 Research Project: AGFORWARD 613520. 10 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-innovations-to-be-evaluated-for-livestock-farmers.html
Kongsted AG, Hermansen JE (2015). Research and Development Protocol for Agroforestry for Free-Range Pig Production in Denmark. 10 March 2015. 7 pp. Available online: http://www.agforward.eu/index.php/en/free-range-pigs-integrated-with-energy-crops.html
Luske B, Vonk M, Bestman M (2015). Research and Development Protocol for Agroforestry for Ruminants in the Netherlands. 14 April 2015. 5 pp. Available online: http://www.agforward.eu/index.php/en/fodder-trees-for-cattle-and-goats-in-the-netherlands.html
Fernández Lorenzo JL, Ferreiro-Domínguez N, González-Hernández P, Rodríguez AR, Mosquera-Losada MR (2015). Research and Development Protocol for Fodder Tree Evaluation in Galicia, Spain. 17 March 2015. 6 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-with-pigs-in-galicia-spain.html

McAdam J (2015). Research and Development Protocol for Agroforestry for Ruminants in Northern Ireland, UK. 1 April 2015. 7 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-with-ruminants-uk.html

Novak S, Emile JC, Pottier E (2015). Research and Development Protocol for Agroforestry for Ruminants in France. 31 March 2015. 12 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-with-ruminants-in-france.html

Smith J (2015a). Research and Development Protocol for Poultry Agroforestry Systems in the UK. 15 June 2015. 9 pp. Available online: http://www.agforward.eu/index.php/en/Poultry-systemUK.html

Smith J (2015b). Research and Development Protocol for Agroforestry for Ruminants in in the UK. 2 June 2015. 8 pp. Available online: http://www.agforward.eu/index.php/en/agroforestry-with-ruminants-uk.html

Table 5.9. Reference for the synthesis of the research and development protocols for work-package 5 (Milestone 22)

Hermansen JE Burgess PJ (2015). Synthesis of the research and development protocols related to agroforestry for livestock systems Milestone 22 for EU FP7 Research Project: AGFORWARD 613520. 5 pp. Available online: http://www.agforward.eu/index.php/en/synthesis-of-the-research-and-development-protocols-related-to-agroforestry-for-livestock-systems.htm

5.4 Test and analyse innovations to provide guidelines (running)

The key efforts now are to address Objective 5.4: to develop and test the proposed innovations, and to analyse and interpret the results. This is achieved through experiments (Task 5.4) and on-farm testing (Task 5.5) and will lead to a report (Milestone 23) describing the preliminary results of the innovations and wider perspectives in August 2016.

Three types of work are being carried out: desk work, comparative classical experiments and case studies/demonstration activities. For each type of livestock sector it was decided that there was a need to identify best practice in relation to design of agroforestry livestock systems due to the lack of documented experience and there was a need to expand and improve an existing database on the nutritive value of tree components for fodder as a common effort among all partners. The work is detailed below.

Best practice

The objective is to identify and communicate 'best practice' in relation to design and manage an agroforestry system for free-range poultry production, free range pig production and ruminant systems, respectively. Guidelines on integrating trees and/or shrubs in livestock production systems are being produced e.g. with regards to tree species, tree density, animal density, management and design of the system.

Data, information and experiences gathered at commercial farms and research plots are being combined with theoretical knowledge. ORC in the UK is heading the activities regarding poultry with contributions from LBI in the Netherlands and Aarhus University in Denmark. INRA, France is heading the activities regarding ruminants with contributions from AFBI in Northern Ireland, LBI, and ORC. Aarhus University is heading the activities regarding pigs with contributions from USC and VEN.

Feed database

LBI has an existing database regarding feed values of tree components. This database is being expanded in terms of tree species and feed quality characteristics with input from all partners. Based on the database farmer-friendly fact sheets will be produced led by LBI (Luske et al. 2015).

Poultry - experiments and demonstration activities

In UK, ORC is investigating shade tolerant sward mixtures that could contribute towards the nutrition and health of the birds. This is done in a comparative study with different three species (native broadleaves and conifers) and different types of understory vegetation. Key parameters being investigated are plant biomass and biodiversity as well as invertebrate biodiversity (Smith 2015a).

In the Netherlands, LBI is analysing data from an existing network 'Trees for chickens' and evaluating the benefits and costs of using fruit trees, willow or miscanthus in poultry runs in terms of labour, tree damage by chickens and overall profitability. The output will be farmer-friendly article comparing the three types of trees (Bestman 2015). LBI will further investigate potential and barriers to have fruit farmers, trees nurseries and poultry famers to work together in order to explore the possible synergies in bringing these different activities together (Bestman 2015)

Ruminants - experiments and demonstration activities

In France, INRA is investigating the nutritive value of trees and scrubs for ruminants through detailed chemical, in-vitro, and in situ methods. Approximately 20 species are included. Further, in a comparative study the spatial organization of trees in a dairy system is being investigated. Hence three organisations are studying high-stem trees, pollards and coppiced trees respectively. Workload, costs, animal behaviour, understory production, nutrient deposition and tree production are being quantified (Novak et al. 2015). Also in France, IDELE is measuring biomass production, quality and flora composition in swards with or without trees (Novak et al. 2015).

In UK, ORC is comparing the productivity and pasture management in systems with non-lactating cattle grazing in between alleys of short rotation coppice (willow, alder or a combination, respectively) and including two swards mixtures. Focus is on biomass production and biodiversity of swards, animal behaviour and nutritive value of tree components (Smith 2015b).

In the Netherlands, LBI is co-working with selected farmers that integrate trees and ruminants to help optimize the system by analysing current practice, identifying adaptations, and monitoring the impacts of changes in management. This includes monitoring of farm inputs and outputs to allow economic evaluation (Luske et al. 2015).

In Northern Ireland, AFBI are revisiting previous experiments to examine and explain the effect of trees, relative to no trees, on pasture production, sheep behaviour, growth and wool production. The experiments include a series of on-farm experiments as well as the long-term at the Loughgall research facility (McAdam 2015).

Pigs - experiments and demonstration activities

In Spain, University of Santiago de Compostela are studying the growth and feeding value for pigs of different clones of *Morus alba* and *Morus nigra* grown at different sites in Galicia that have different climates (Fernandez and Mosquera-Losada 2015).

In Denmark, Aarhus University is studying the impact of including poplar in lactation paddocks for sows and the importance of the layout of the paddocks on nitrate leaching from the paddocks. In addition sow behaviour as well as damage on trees is investigated (Kongsted and Hermansen 2015).

In Italy, Veneto Agricoltura is investigating different means for protection of different tree species of variable age, measuring effects in terms of biomass growth and animal behavior (Bondesan 2015).

5.5 Dissemination of results (on-going)

An on-going objective of the work-package (Objective 5.5) is to provide and promote guidelines for farmers on how to establish economically viable agroforestry practices within poultry, ruminant and pig production systems (with work-package 9). Preliminary results have been presented in a number of national and international events (Table 9.8).

5.6 Co-ordination of the work in work-package 5

The work-package leader (John Hermansen) has participated in Executive Board meetings and WP5 Skype meetings. Also at the general assembly in Crete and in Montpellier WP 5 workshops was held with participation of all partners.

5.7 Use of resources in work-package 5

At the end of June 2016, 56.96 person months had been spent in work-package 5, equivalent to 62% of the total. This is in line with expectations (Table 5.10).

Table 5.10. Person-month inputs to work-package 5 for First Reporting Period (Jan – Dec 2014), and Second Reporting Period (Jan 2015-June 2016)

	First period (Jan-Dec 2014)	Second period (Jan 2015 to June 2016)	Sub-total	Project budget
AU	1.50	3.64	5.14	17
ORC	4.49	7.11	11.60	14
INRA	3.54	7.90	11.44	14
LBI	1.94	6.86	8.80	13
VEN	1.57	3.29	4.86	9
AFBI	0.00	2.77	2.77	8
USC	1.80	5.10	6.90	7
ACTA (IDELE)	1.60	2.03	3.63	5
ISA	0.25	1.07	1.32	3
EURAF	0.20	0.30	0.50	2
Total	16.89	40.07	56.96	**92**

5.8 Issues and actions

There are no major issues with this work-package and progress is proceeding to plan.

6 Work package number 6

Work-package number	**6**
Work-package name	**Field- and farm-scale evaluation of innovations**
Leader	João HN Palma
Organisation	Instituto Superior de Agronomia, Universidade de Lisboa
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 6

João Palma is leading this work package which is evaluating agroforestry innovations at a field- and farm-scale. During the second reporting period there have been the production of four milestones and one deliverable (Table 6.1; Table 6.2).

Table 6.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 6 from month 12 to month 30 (indicated in orange), and the plan until month 36 (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP6 Field and Farm Evaluation																									
T6.1 Collate climate database (MS26) Completed in first period																									
T6.2 Identify practices to model (MS27)			M																						
T6.3 Collate market-values (MS28)							M																		
T6.4 Collate non-market data (MS28)							M																		
T6.5 Improve models (MS29; MS30)									M																
T6.6/7 Collect biophysical data (MS28)							M																		
T6.8 Model innovations (D6.16/17/18)															D										D
T6.9 Co-ordinate WP6																									

Table 6.2. Summary of the status of milestones and deliverables in work-package 6 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	Due date	Status
First reporting period		
MS26 Project database of climate data	June 2014	Completed and on internet
Second reporting period		
MS27 Systems and innovations to be modelled	Feb 2015	Completed and on internet
MS28 Database of system description	June 2015	Completed and on internet
MS29 Improvement of Yield-SAFE	Aug 2015	Completed and on internet
MS30 Improvement of Hi-sAFe	Aug 2015	Completed and on internet
D6.16 Initial modelled outputs	Feb 2016	Completed and on intranet
Third reporting period (on-going)		
D6.17 Modelled outputs	Dec 2016	Being developed
D6.18 Farm-scale modelled outputs	Aug 2017	Being developed

6.1 Establish a participatory research and development network (completed)

The first activity (Task 6.1) of work-package 6 was to develop a pan-European database of current and future climate data for biophysical model use. In the first period we reported that the database was produced and made available on the intranet. During the Second Reporting Period we have made the climate data tool available on the AGFORWARD website (Table 6.3; Figure 6.1). Between January and June 2015, João Palma updated the tool with new datasets from IPCC Assessment Report 5 with new carbon concentrations scenarios, and improved the tool in performance regarding the speed of retrieval. The model can now retrieve climate datasets in less than 5 seconds. This enables good performance when linking with the web version of Yield-SAFE.

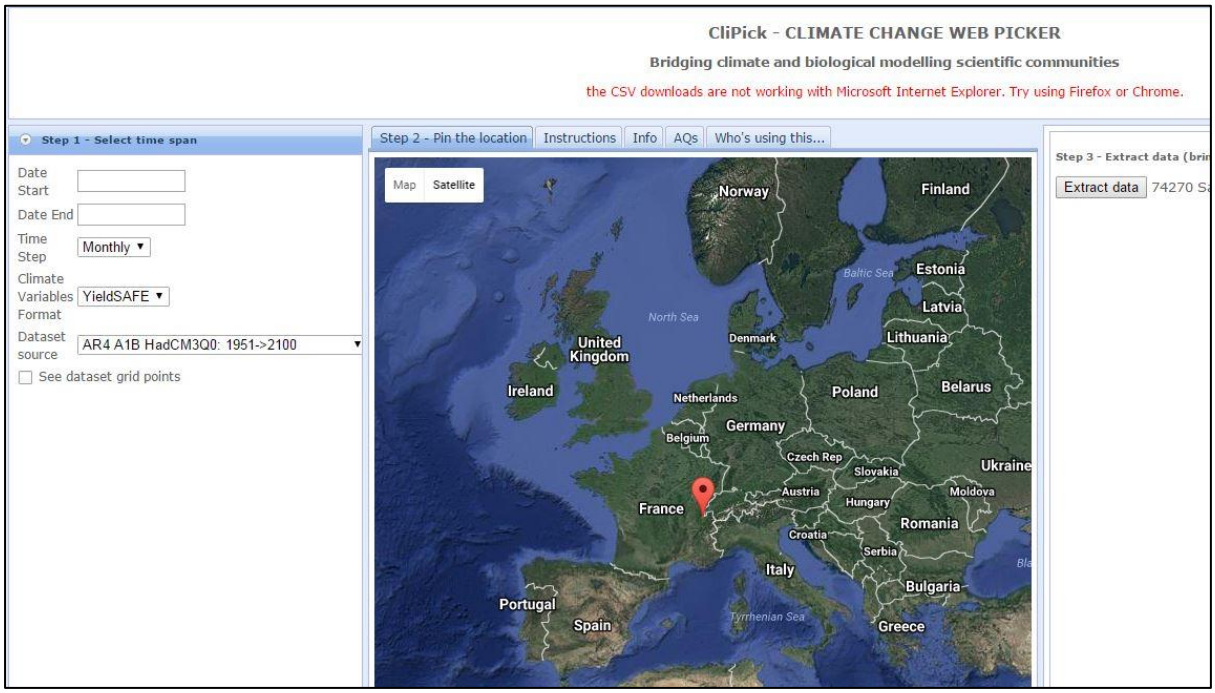


Figure 6.1. The CliPick database is now available on the AGFORWARD website. It allows the extraction of climate data for any location in Europe.

Table 6.3. The climate database is now available on the AGFORWARD website (Milestone 26)

Palma JHN (2015). CliPick: Project Database of Pan-European Climate Data for Default Model Use. Milestone Report 26 (6.1) for EU FP7 Research Project: AGFORWARD 613520. 10 October 2015. 22 pp. http://www.agforward.eu/index.php/en/clipick-project-database-of-pan-european-simulated-climate-data-for-default-model-use.html

6.2 Identify innovation practices to model (completed)

The second task (Task 6.2) is to identify the agroforestry systems and practices to model. A report describing the systems to be modelled (Milestone 27) was completed in June 2015, and following review was placed on the AGFORWARD website on 30 September 2015 (Table 6.4).

Table 6.4. Reference for the report describing the agroforestry systems and innovations to model (Milestone 27)

Palma J, Graves A, Crous-Duran J, Paulo JA, Upson M, Dupraz C, Gosme M, Lecomte I, Ben Touhami H, Mézière D, Burgess PJ (2015). Identification of Agroforestry Systems and Practices to Model. Milestone Report 27 (6.2 for EU FP7 Research Project: AGFORWARD 613520. (25 September 2015). 38 pp. http://www.agforward.eu/index.php/en/identification-of-agroforestry-systems-and-practices-to-model.html

6.3 Database for physical parameters for the agroforestry systems (completed)

The third activity (Task 6.3) is to develop a database for the consistent description of the agroforestry systems (Milestone 28). During 2015, staff from ISA and Cranfield University collated a report, produced in October 2015, which included the characteristics of 27 systems in a common "factsheet" format which is available on the AGFORWARD website (Table 6.5).

Table 6.5. Reference for a database for physical parameters for the agroforestry systems (Milestone 28)

Palma, J.H.N., Crous-Duran, J., Graves, A.R., Burgess, P.J. (2015). Database of Agroforestry System Descriptions. Milestone Report 28 (6.3) for EU FP7 Research Project: AGFORWARD 613520. (20 October 2015). 81 pp. Available: http://www.agforward.eu/index.php/en/database-of-agroforestry-system-descriptions.html

6.4 Database for non-market ecosystem values (completed, but on-going)

The fourth task (Task 6.4) is to determine the impact of the systems on ecosystem services, and many of these do not have a readily-available market value. This is needed to achieve Objective 6.4 which is to evaluate the "supporting" and "regulating" services of agroforestry systems, and Objective 6.5 which is to evaluate the cultural service provided by agroforestry systems. Dr Silvestre de Jalon was recruited to the post of Research Fellow in Agroforestry Modelling at Cranfield in October 2015, and he has been working on developing methods to include non-market ecosystem values within Yield-SAFE and Farm-SAFE models. Dr Garcia de Jalon presented a paper on these developments at the Third European Agroforestry Conference (Table 6.6).

Table 6.6. Reference regarding work on estimating non-market ecosystem values

Garcia de Jalon S, Graves A, Kaske KJ, Palma J, Crous-Duran J, Burgess PJ (2016). Assessing the environmental externalities of arable, forestry, and silvoarable systems: new developments in Farm-SAFE. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 363-366 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.

6.5 Improving the Yield-SAFE and Hi-sAFe models (completed)

The fifth task (Task 6.5) is to improve two existing biophysical models (Yield-SAFE and Hi-sAFe) which describe the interactions between trees and crops, in the context of different climatic, soil, and management conditions. In one sense, computer models can always be continued to be developed, but we have made sufficient progress to demonstrate that the models have been improved.

6.5.1 Yield-SAFE

Yield-SAFE is a daily-time-step model which can describe the yields of crops and trees in agricultural, agroforestry, and forestry systems. Between 20 and 30 April 2015, staff from Cranfield and ISA worked closely on improving existing versions of Yield-SAFE. The meeting report is available on the intranet (Palma et al. 2015).

Milestone 6.4 describes the additional routines that Cranfield University and ISA have incorporated into the model. The additions include the capacity to include perennial grass, rather than an annual grass, as a crop; this required the inclusion of a maintenance respiration rate and there is also an additional routine to describe livestock carrying capacity. New routines have also been included to model cork and fruit production. The inclusion of a validated fruit module for acorn in the dehesas and montados of Spain and Portugal was also supported under a Short Term Scientific Mission under the COST action Non Wood Forest Products (FP1203). Other modifications include a change to calculated water uptake by trees in relation to the fine root mass and a prediction of the effect of trees on air temperatures and wind speed. In order to model environmental externalities, sub-routines have been included to predict the turnover of soil organic carbon and the leaching of nitrate.

In addition to adding new processes, João Palma (ISA) has translated the Yield-SAFE model into the Python programming language to allow on-line execution. All of these improvements are described in Milestone 29 (Table 6.7).

Table 6.7. Improvements to Yield-SAFE are reported in Milestone 29, improvements to Farm-SAFE are reported in Deliverable 9.27, and improvements to Hi-sAFe are reported in Milestone 30

Yield-SAFE: Palma JHN, Graves AR, Crous-Duran J, Upson, M, Paulo JA, Oliveira TS, Garcia de Jalón S, Burgess PJ (2016). Yield-SAFE Model Improvements. Milestone Report 29 (6.4) for EU FP7 Research Project: AGFORWARD 613520. (5 July 2016). 30 pp. http://www.agforward.eu/index.php/en/yield-safe-model-improvements.html

Farm-SAFE: Graves A, Palma J, Garcia de Jalon S, Crous-Duran J, Liagre F, Burgess PJ (2016). Deliverable 9.27(9.3) Web-application of the Yield-SAFE and Farm-SAFE Model: Farm-SAFE_Jun2016. Microsoft Excel worksheet model developed as part of the AGFORWARD project. 40 MB. June 2016. http://www.agforward.eu/index.php/en/web-application-of-yield-safe-and-farm-safe-models.html

Hi-sAFe: Lecomte I, Dupraz C, Gosme M, Blitz C (2016). Improvement of the Hi-sAFe model. Milestone 30 (6.5) for EU FP7 Research Project: AGFORWARD 613520. (21 July 2016). 7 pp. http://www.agforward.eu/index.php/en/improvement-of-the-hi-safe-model.html

6.5.2 Farm-SAFE

The original Farm-SAFE model was developed in 2006 as part of the European Union sponsored SAFE project (2001-2005). It was developed to compare arable, forestry and silvoarable systems across four areas of a farm in order to determine the feasibility of silvoarable systems on European farms. During the AGFORWARD project we have created an updated version (called Farm-SAFE_Jun2016)

(Table 6.7) which links Farm-SAFE to an on-line version of the Yield-SAFE biophysical model and the CliPick climate data set (Table 6.3).

Developments within the modified Farm-SAFE model include the addition of new farm operations (e.g. short rotation coppice and fruit harvest) and an enhanced database of new systems (e.g. poplar short rotation coppice in Germany and cherry for fruit production in grassland in Switzerland, and organic silvoarable agroforestry with willow short rotation coppice in the UK). The Farm-SAFE model is available on the AGFORWARD web-site where it can be downloaded.

6.5.3 Hi-sAFe

Hi-sAFe is a mechanistic computer-based model, originally developed in the SAFE project, which can simulate tree and crop productivity in agroforestry systems in three dimensions. In the AGFORWARD project we are using Hi-sAFe to understand and describe agroforestry processes that occur in three-dimensions and small time-intervals. It is a much more detailed model than Yield-SAFE which assumes simple 2-D tree-crop arrangements and uses a daily time-step. Initial development of Hi-sAFe was delayed because INRA initially employed a post-doctoral fellow who did not stay in position. However INRA has subsequently employed Isabel Lecomte, who was also involved with the original development of the model.

In Milestone 30 (Table 6.7), Christian Dupraz and a team at INRA describes some of the improvements made to Hi-sAFe during the initial years of the AGFORWARD project. This culminated in a workshop in Montpellier in May 2016. INRA has corrected various bugs, they have improved the export procedures, modified the speed of execution, and improved the management of crop rotations.

6.6 Collecting the biophysical data for model validation and calibration (Milestone reached but ongoing)

In Task 6.6, ISA, INRA, and CRAN are working with the other project partners to collect the biophysical information that is needed to validate and calibrate the use of the Yield-SAFE and Hi-SAFE models to evaluate the efficacy and cost-effectiveness of the innovations identified by work-packages 2, 3, 4 and 5. As indicated although initial data have been completed, the collation of data is an ongoing process. A WP6 workshop was organised in Monchique (Portugal) from 20-30 April 2015 involving Joao Palma, Anil Graves, Matthew Upson and Josep Crous-Duran. A WP6 workshop was also arranged by João Palma and Josep Crous-Duran in June 2015 in Kriopigi, Greece focused on collecting data and modelling for WP3 systems. Some of the initial data that were collected are reported in Milestone 28 (Table 6.5).

6.7 Collecting management and economic data for validation and calibration (Milestone reached but ongoing)

Task 6.7, effectively is similar to Task 6.6 except that the focus is on management and economic parameters. Some of the initial data that were collected are reported in Milestone 28 (Table 6.5).

6.8 Modelling of agroforestry management options

Objective 6.7 is to compare the long-term financial impact of the proposed agroforestry systems relative to a base-line, which are often monoculture systems. Objective 6.8 focuses on the long-term ecosystem services impact, Objective 6.9 focuses on risk and uncertainty, and Objective 6.10 is to use such evaluations to identify how and when agroforestry can offer benefits. Each of these objectives is addressed by Task 6.8 which comprises the modelling of a range of stakeholder-defined management options. The initial modelled outputs at a field-scale are described in Deliverable 6.16, which was uploaded onto the EC Portal on 27 August 2016 (Table 6.8). The results are summarised in Box 6.1.

Table 6.8. The initial modelled outputs at a field-scale are described in Deliverable 6.16

Gosme M, Blitz-Frayret C, Burgess PJ, Crous-Duran J, Dupraz C, Dux D, Garcia de Jalon S, Graves AR, Herzog F, Lecomte I, Moreno G, Oliveira T, Palma J, Paulo JA, Sereke F, Tomé M (2016). Initial modelled outputs at field scale. Deliverable 6.16 (6.1): Initial modelled outputs at field scale to support best management practices for resource efficiency of agroforestry systems. 23 August 2016. 29 pp. Submitted to the EC portal on 27 August 2016.

Box 6.1. Description of some of the content of Deliverable 6.16

Deliverable 6.16 includes abstracts from two papers published in peer-reviewed journals (Palma et al. 2014 and Sereke et al. 2015), an abstract from a paper about to be submitted, and copies of four papers presented at the Third European Agroforestry Conference (Crous Duran et al. 2016; Dupraz et al. 2016; Palma et al. 2016, and Garcia de Jalon et al. 2016).

One of the questions raised by the stakeholder groups was the most appropriate spatial arrangement of silvoarable systems. This is addressed in the paper by Dupraz et al. (2016). Using the Hi-sAFe model, the team at INRA indicate that for winter and summer crops, north-south tree lines should be preferred at high latitudes (>50°) and east-west tree lines should be preferred at low latitudes (<40°) to maximize the crop irradiance during the grain filling phases. At high latitudes, given the low late summer irradiance of crops with east-west tree lines, summer crops should never be associated to east-west tree lines. For temperate latitudes (40° to 50°), the tree line orientation has no significant impact on crop irradiation at most key phenological stages such as flowering or grain filling.

Although the work was not directly supported by AGFORWARD, Sereke et al. (2015) and other researchers from the AGFORWARD project used the Yield-SAFE model to estimate the land equivalent ratios of agroforestry systems in Switzerland (timber-arable vs fruit-arable vs timber-grassland vs and fruit-grassland) with different tree species (cherry vs walnut) and with either 40 or 70 trees ha^{-1}. Mixing trees and crops was commonly (in 12 out of the 14 options) predicted to be more productive than growing them in separate forestry and arable systems i.e. a land equivalent ratio higher than 1 (predicted land equivalent ratios ranged from 0.95 to 1.30).

A useful feature of modelling studies is that they allow quick assessment of the potential for new systems in regions where they are not currently being implemented. For example, agroforestry with eucalyptus is not practised in Portugal, but the stakeholders from a cork-producing region in Portugal asked researchers to evaluate its potential in their region (Palma et al. 2016). Using Yield-SAFE, land equivalent ratios of simulated eucalyptus-ryegrass agroforestry systems were found to

range between 1 (irrigated system with 52 trees per hectare) and 1.2 (for rainfed-systems with 203 trees per hectare). The results also suggested that similar stand biomasses can be achieved with less trees (=> lower establishment cost) in agroforestry than in forest monoculture.

The Yield-SAFE model also gave good results in predicting the acorn production of dehesa/montado systems (Crous-Duran et al. 2016), which will be useful to test the capacity of agroforestry to address the strong seasonality of forage resources for pigs. Yield-SAFE was used to compare carbon storage achieved through different scenarios of land use (agroforestry vs forestry) allocation to different types of soils (low vs high water holding capacity (Palma et al. 2014). The modelled results indicate that on land with a high water holding capacity, it is possible to maintain food production (through the crop/animal component of agroforestry) and achieve higher rates of carbon sequestration in the agroforestry trees than in the trees of a forest on poorer land. Furthermore, the simulations show that an implementation of 10% of agroforestry in areas with high soil water holding capacity results in approximately the same carbon storage as 50% implementation in poorer agricultural land. This type of analysis, comparing different scenarios of adoption in different soil and climate conditions is particularly interesting for land use planners who allocate different land uses to different soils, and policy makers who determine the type of financial incentives given to support carbon sequestration.

Carbon emissions from field operations (fuel and machinery and agrochemicals manufacture) have been evaluated in Farm-SAFE (Garcia de Jalon et al. 2016) using a life cycle assessment model to compare the emissions of the different land uses (arable, forestry and agroforestry). Farm-SAFE has also started to be used to convert the provision of some environmental externalities into monetary terms, hence allowing a financial and economic assessment of costs and benefits of alternative land uses.

Crous Duran J, Moreno G, Oliveira TS, Paulo JA, Palma JHN. (2016). Modelling holm oak acorn production in South-Western Iberia. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 344-346 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.

Dupraz C, Lecomte I, Molto Q, Blitz-Frayret C, Gosme M. (2016). Agroforestry at all latitudes? Unexpected results about best designs to allow more light to the crops at various latitudes. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 359-362 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016

Garcia de Jalon S, Graves A, Kaske KJ, Palma J, Crous-Duran J, Burgess PJ (2016). Assessing the environmental externalities of arable, forestry, and silvoarable systems: new developments in Farm-SAFE. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 363-366 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.

Palma JHN, Paulo JA, Tomé M (2014). Carbon sequestration of modern *Quercus suber* L. silvoarable agroforestry systems in Portugal: a YieldSAFE-based estimation. Agroforestry Systems 88: 791–801. doi:10.1007/s10457-014-9725-2.

Palma JHN, Oliveira TS, Crous-Duran, Paulo JA. (2016). Using Yield-SAFE model to assess hypothetical eucalyptus silvopastoral systems in Portugal. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 348-351 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.

Sereke F, Graves AR, Dux D, Palma JHN, Herzog F (2015). Innovative agroecosystem goods and services: key profitability drivers in Swiss agroforestry. Agronomy for Sustainable Development 35: 759–770. doi:10.1007/s13593-014-0261-2.

6.9 Co-ordination of the work-package

The last task (Task 6.9) of this work-package is to co-ordinate and synthesise the work. This is being undertaken by João Palma (ISA) who has actively participated in Executive Board and General Assembly meetings. In order to progress the work, work-package 6 has organised workshops in

Portugal (20-30 April 2015) involving Anil Graves and Matthew Upson from Cranfield. A workshop was also held at Kriopigi, Greece in June 2015 that involved staff from ISA, Cranfield, TEI, and USC.

6.10 Use of resources in work-package 6

At the end of June 2016, 82.07 person months had been allocated to work-package 6, equivalent to 46% of the total (Table 6.9). This is in line with expectations as the key tasks only commenced after the first year of the project (Table 6.9).

Table 6.9. Person-month inputs to work-package 6 for First Reporting Period (Jan – Dec 2014), and Second Reporting Period (Jan 2015-June 2016)

Organisation	First period (Jan-Dec 2014)	Second period (Jan 2015 to Jun 2015)	Sub-total	Project budget
ISA	11.64	23.31	34.95	53.5
CRAN	2.13	16.54	18.67	44.0
INRA	0.00	16.16	16.16	41.0
BTU	1.78	0.50	2.28	6.0
UEX	0.10	1.30	1.40	6.0
AU	0.00	0.00	0.00	4.0
EFI	0.37	0.04	0.41	3.0
ACTA	0.00	0.00	0.00	3.0
TEI	0.56	0.53	1.09	3.0
ORC	0.11	0.90	1.01	3.0
USC	0.10	1.90	2.00	2.0
UPCH	0.00	0.00	0.00	2.0
AFBI	0.00	0.83	0.83	2.0
ICRAF	0.00	0.00	0.00	2.0
AGROOF	0.20	1.50	1.70	1.7
FDEA	0.04	0.00	0.04	1.0
CREA	0.13	0.25	0.38	1.0
LBI	0.00	0.58	0.58	1.0
CNR	0.20	0.37	0.57	1.0
Total	17.36	64.71	82.07	180.2

6.11 Issues and actions

At present work-package 6 appears to be progressing to schedule.

7 Work package number 7

Work-package number	**7**
Work-package name	**Landscape-scale evaluation of innovative agroforestry**
Leader	Tobias Plieninger, with support of Nora Fagerholm
Organisation	University of Copenhagen
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 7

The University of Copenhagen (UCPH) is leading this work package to evaluate agroforestry at a landscape-scale. The key objective during the first year has been the creation of a protocol for assessing biodiversity, ecosystem services and farm profitability related to agroforestry at landscape scale and the selection of 12 sample sites for landscape analysis (Table 7.1). The two planned milestones for the period have been completed (Table 7.2).

Table 7.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 7 from month 12 to month 30 (indicated in orange), and the plan until month 36 (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP7 Landscape-scale evaluation																									
T7.1 Synthesise existing knowledge; create protocols (MS31; D7.19)	M												D												
T7.2 Select and characterise systems/landscapes (MS32; MS33)	M												M												
T7.3 Assess biodiversity and ecosystem systems under scenarios (MS34; D7.20)													M												
T7.4 Economic analysis (MS35)																			M						
T7.5 Identify synergies (D7.21)																									
T7.6 Upscale and map results (D7.22)																									
T7.7 Co-ordinate WP7																									

Table 7.2. Summary of the status of milestones and deliverables in work-package 7 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	**Due date**	**Status**
First reporting period		
MS31 Standardised protocol for biodiversity, ecosystem services and farm profitability	Dec 2014	Completed and on intranet
MS32 Selection of key agroforestry systems and 12 sample landscapes for landscape evaluation	Dec 2014	Completed and on intranet
Second reporting period		
D7.19 Synthesis of existing European agroforestry	Dec 2015	Completed and on web
MS33 Spatial characterization of sample landscapes	Dec 2015	Draft version on intranet
MS34 Definition of scenario framework	Dec 2015	Completed and on intranet
MS35 Database for cost benefit analysis	Jun 2016	Completed and on intranet
Third reporting period (on-going)		
D7.20 Report on ecosystems and profitability	Mar 2017	Being developed
D7.21 Report on profitability	Dec 2017	Being developed
D7.22 Scenario maps	Dec 2017	Not yet started

7.1 Biodiversity, ecosystem services and profitability of agroforestry (completed)

Objective 7.1 is to systematise existing knowledge of the outcomes of European agroforestry systems in terms of biodiversity, ecosystem services and farm profitability. A standardised protocol for describing biodiversity, ecosystem services, and profitability (Milestone 31) was completed in December 2014 and was reported in the last Progress Report. A synthesis report (Deliverable 7.19) of existing knowledge on European agroforestry systems was achieved through three papers which have been reviewed and published in peer-reviewed papers (Table 7.3). This includes a paper by Torralba et al. (2016) (Box 7.1). The papers have also been made publicly available through the AGFORWARD website (Table 7.3).

Table 7.3. References for the three peer-reviewed papers and for Deliverable 7.19

Fagerholm N, Torralba M, Burgess PJ, Plieninger T (2015). A systematic map of ecosystem services assessments around European agroforestry. Ecological Indicators 62: 47-65 http://dx.doi.org/10.1016/j.ecolind.2015.11.016

Torralba M, Fagerholm N, Burgess PJ, Moreno G, Plieninger T (2016). Do European agroforestry systems enhance biodiversity and ecosystem services? A meta-analysis. Agriculture, Ecosystems and Environment 230: 150-161. http://dx.doi.org/10.1016/j.agee.2016.06.002

Plieninger T, Hartel T, Martín-López B, Beaufoy G, Bergmeier E, Kirby K, Montero MJ, Moreno G, Oteros-Rozas E, Van Uytvanck J (2015). Wood-pastures of Europe: Geographic coverage, social-ecological values, conservation management, and policy implications. Biological Conservation 190: 70-79. http://dx.doi.org/10.1016/j.biocon.2015.05.014

Plieninger T, Fagerholm N, Torralba M, Moreno G, Hartel T, Burgess PJ (2016). Synthesis of Existing European Agroforestry Performance. Deliverable 7.19 (7.1) for EU FP7 Research Project: AGFORWARD 613520. July 2016. 87 pp. http://www.agforward.eu/index.php/en/synthesis-of-european-agroforestry-performance-in-terms-of-biodiversity-ecosystem-services-and-profitability.html

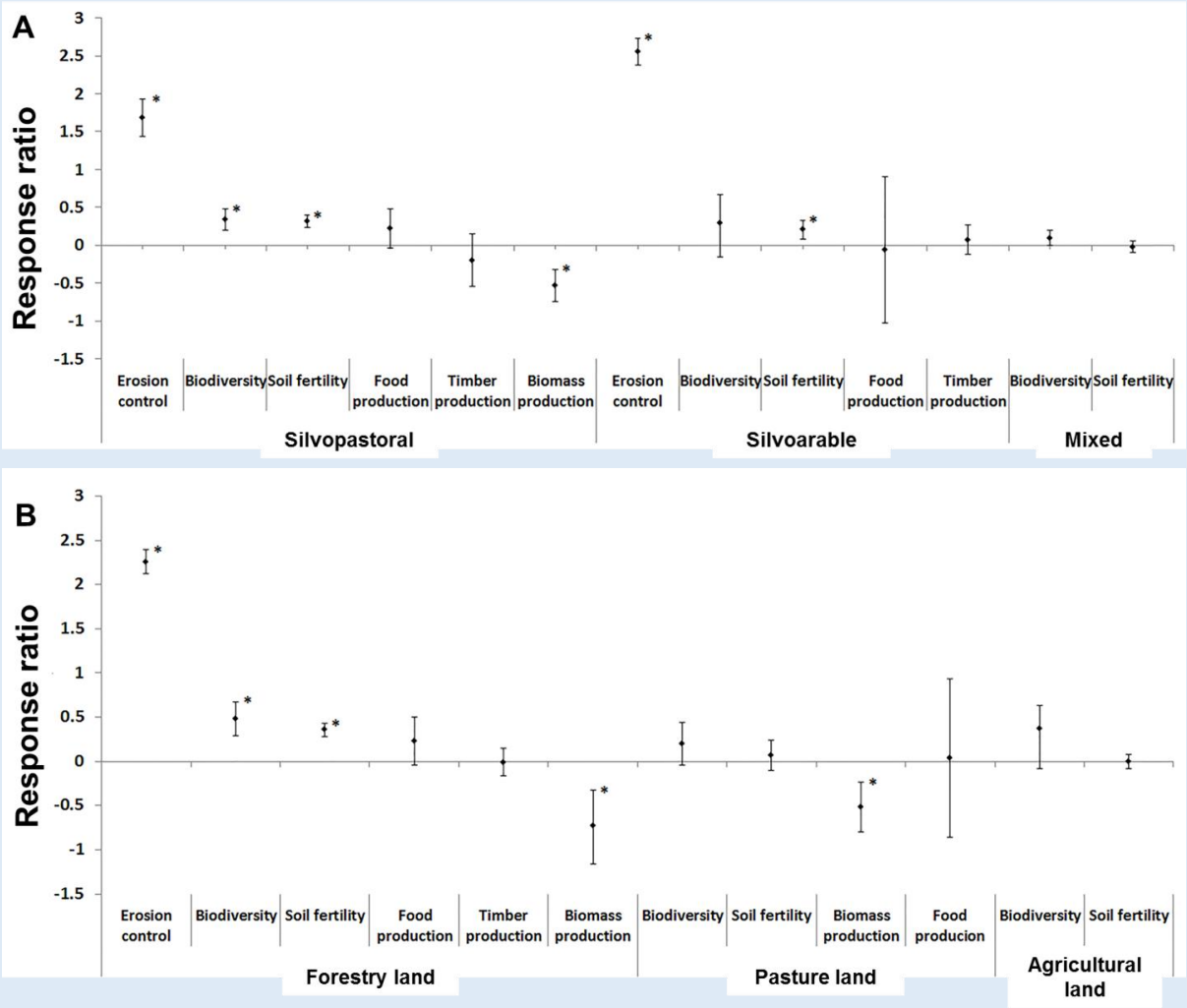
Box 7.1. Summary of the paper: "Do European agroforestry systems enhance biodiversity and ecosystem services? A meta-analysis" (from Torralba et al. 2016)

Agroforestry has been proposed as a sustainable agricultural system compared to conventional agriculture and forestry, conserving biodiversity and enhancing ecosystem service provision while not compromising productivity. However, the available evidence for the societal benefits of agroforestry is fragmented and does often not integrate diverse ecosystem services into a common assessment. To upscale existing case-study insights to the European level, we conducted a meta-analysis on the effects of agroforestry on ecosystem service provision and on biodiversity levels. From 53 publications we extracted a total of 365 comparisons that were selected for the meta-analysis.

Results revealed an overall positive effect of agroforestry (effect size = 0.454, $p < 0.01$) over conventional agriculture and forestry. However, the results were varied with differences between the types of agroforestry practice and the ecosystem service assessed. The results indicated that erosion control, biodiversity, and soil fertility are enhanced by agroforestry while there is no clear effect on provisioning services. The effect of agroforestry on biomass production is negative.

Comparisons between agroforestry types and reference land-uses showed that both silvopastoral and silvoarable systems increase ecosystem service provision and biodiversity, especially when

compared with forestry. Mediterranean tree plantation systems should be especially targeted as soil erosion could be reduced while soil fertility is increased. Landscape scale analysis seems to be necessary to capture the complexity of agricultural landscapes in ecosystem service assessments. The paper concludes that agroforestry can enhance biodiversity and ecosystem service provision relative to conventional agriculture and forestry in Europe and could be a strategically beneficial land use in rural planning if its inherent complexity is considered in policy measures.



Mean effect size (response ratios) of agroforestry on different ecosystem services, differentiated according to: A. broad types of agroforestry, and B. comparator systems used. Here, positive effects refer to positive effect of agroforestry when compared to alternative land-use system. * Effect sizes differed significantly from zero ($p<0.05$)

7.2 Selection of sample landscapes (completed)

Objective 7.2 is to select 12 sample landscapes in Mediterranean, Continental, Atlantic and Northern Europe for a landscape-scale analysis of agroforestry systems. As reported in the First Progress Report, 12 sample landscapes were identified and were reported in Milestone 32. During 2015, it became clear that ACTA could not secure a landscape site to investigate "agroforestry systems for arable lands" within the Atlantic region. Hence after discussion, it was agreed to re-allocate some of the remaining work-package 7 funds for ACTA to Cranfield University who identified a sample landscape in "the Brecks" of Eastern England. Some of the ACTA funds and person-months were also

allocated (through the Second Amendment) to TEI in Greece, where landscape test sites had been identified (Table 7.4).

Table 7.4. Description of the sample sites identified for the landscape analysis and the link partner. A replacement Atlantic site was identified by Cranfield in Eastern England.

Agroforestry system	Agro-ecological zone			
	Mediterranean	**Continental**	**Atlantic**	**Others**
Agroforestry systems of high nature and cultural value (WP2)	Cork Oak Montado, Portugal (ISA)	Wood pasture Romania (UBB)	Bocage France (INRA)	Fennoscandian wood pastures (UCPH)
Agroforestry systems with high value tree (WP3)	Olive tree system Greece (TEI)	Cherry orchards (FDEA)	Chesnut soutos Spain (USC)	
Agroforestry systems for arable lands (WP4)	Intercrop walnut Spain (UEX)	Intensive arable system with trees/ woodlands Germany (UCPH)	Silvoarable systems in the Brecks of Eastern England (CRAN)	
Agroforestry systems for livestock (WP5)	Dehesa, Spain (UEX) (Cattle, sheep and pig)	Wood pastures Switzerland (FDEA) (Horses and cattle)		

The spatial characterisation of the sample landscape sites has been prepared by Gerardo Moreno and the report (Milestone 33) is available on the AGFORWARD intranet (Table 7.5). The work is largely completed but some partners have found it necessary to relocate some of the landscape test sites during the field work.

Table 7.5. Reference for Milestone 33

Moreno G, Aviron S, Burgess P, Chouvardas D, Crous-Durán J, Ferreiro N, Franchella F, Francon-Smith P, Hartel T, Galanou E, García de Jalón S, Giralt Rueda JM, Graves AR, Juárez E, Kay S, Louviot Q, Macicasan V, Pantera A, Petrucco G, Santiago Freijanes JJ, Szerencsits E, Torralba M, Viaud V, (2016). Spatial characterization of sample landscapes. Milestone 33 (7.3) for the AGFORWARD project. Updated 26 August 2016. 50 pp.

7.3 Assessment of biodiversity and ecosystem services (started)

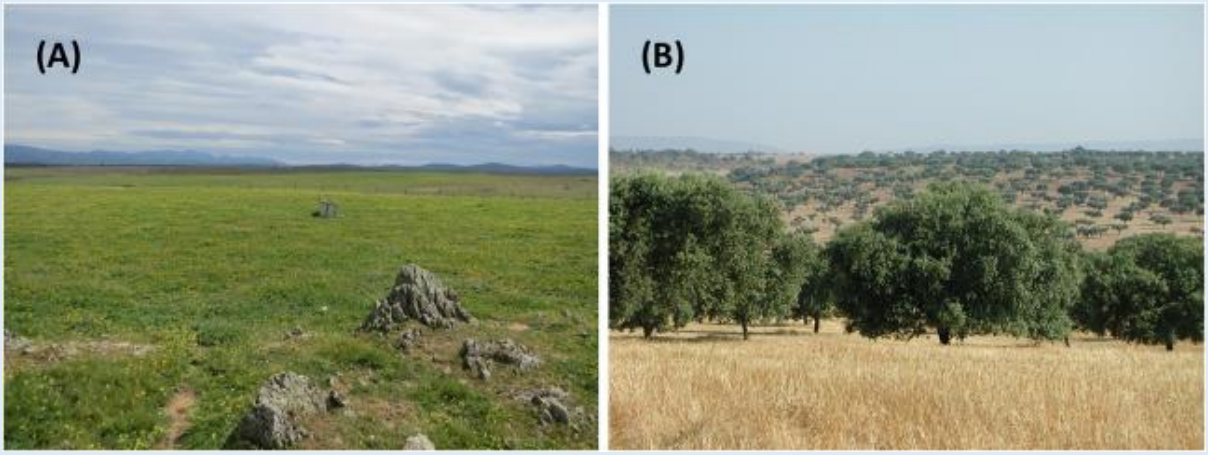
Objective 7.3 is to assess the biodiversity and ecosystem services provided by agroforestry in the sample landscapes (Table 7.4). This work has been led by UPCH and FDEA. Following the procedures described in the protocol (Milestone 31), the protocols have been tested during 2015 in two pilot study regions: “Trujillo” in Extremadura in Spain and “Schwarzbubenland” in the Jura mountains of Switzerland. Based on this experience, a work-package 7 workshop was held in Rennes in January 2016 where the protocols were adapted ahead of the assessments being carried out at the other sites during the summer of 2016.

Based on the assessment on the pilot studies, one paper was published using the results of the sociocultural assessment in the Mediterranean dehesas of Extremadura (Fagerholm et al. 2016) (Box

7.2) and a poster was presented in the Third European Agroforestry Conference based on part of the biophysical assessment in Fruit Orchards systems of Switzerland (Kay 2016).

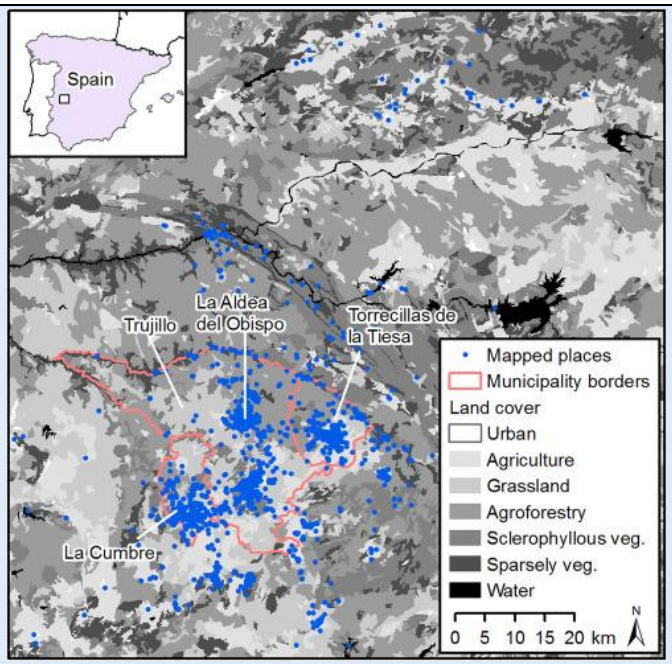
Box 7.2. Description of the paper: "Assessing the linkages between ecosystem services, and-use and well-being in an agroforestry landscape using public participation GIS" by Fagerholm et al. 2016

While a number of studies have applied public participation GIS (PPGIS) approaches to the spatial assessment of ecosystem services, few have considered the associations between the spatial distribution of ecosystem services and the context-specific nature of self-reported well-being. This study engaged the general public to identify and map a range of ecosystem services that originate in place-based, local knowledge and explore the context-dependent nature of subjective well-being. A PPGIS survey with 219 local residents was conducted in a Spanish agroforestry (dehesa) landscapes followed by an analysis of the spatial patterns of mapped ecosystem services, their relation to land cover, protected area and common land patterns. In addition, the study explored the landscape values contributing to people's well-being; and the relationships between ecosystem services in different land covers, landscape values and socio-demographic characteristics.



Examples of (A) open pasture and (B) holm oak dehesa areas

A mosaic of landscape types (i.e., the landscape) provided more ecosystem services (especially cultural and provisioning) to people compared with the individual land system of agroforestry. However, land tenure and public access significantly guided the spatial practices and values of the people beyond the preferred landscape types. The contribution of the landscape to well-being is largely related to values based on interactions among people and the landscape, as tranquillity/relaxation and people-people interactions such as being with family and friends. The paper discusses the specific contribution of agroforestry landscapes to the provision of ecosystem services and human well-being. It concludes that the integration of the applied methods of social-cultural assessment links to ecosystem services frameworks whilst representing a more holistic conceptualisation of people's benefits from landscapes.



Study areas, the four neighbouring municipalities of Trujillo, Torrecillas de las Tiesas, La Cumbre and La Aldea del Obispo. La Aldea del Obispo is a small enclave within Trujillo

7.4 Cost-benefit analysis at farm- and landscape-scales (undertaken for some sites, but still on-going)

Objective 7.4 is to perform a financial and economic cost-benefit analysis at farm and landscape scales. CRAN has developed the protocol for this and is leading the related activities (Task 7.4) primarily based on the FARM-SAFE bio-economic model. The process is being tested on two pilot sites in 2015, and will be reviewed before being rolled-out to the other sample sites. A database to provide the input data required to assess the profitability of agroforestry systems, using cost-benefit analysis, has been produced for the Cherry orchard systems in Switzerland, the intercropped walnut and the dehesa in Spain, the intensive arable system with trees in Germany and arable agroforestry in the Brecks in the UK. The structure and content of the database has been reported in Milestone 35 which is available on the AGFORWARD intranet (Table 7.6).

Table 7.6. Reference for Milestone 35

Garcia de Jalon S, Graves AR, Burgess PJ (2016). Database for Cost Benefit Analysis of Selected Agroforestry Systems at Farm and Regional Scales. Milestone 35 (7.5) for the AGFORWARD project. 30 June 2016. 11 pp.

7.5 Synergies and trade-offs (recently started)

Objective 7.5 which is to identify synergies and trade-offs between economic and environmental outputs at a landscape-scale, depends on the preceding tasks described above, and was due to start in June 2016. This is still work in progress, but four papers have been published looking at the relationships between economic and environmental outputs (Table 7.7).

Table 7.7. Four papers have been produced looking at economic and environmental effects of agroforestry at a landscape scale

Fagerholm N, Oteros-Rozas E, Raymond CM, Torralba M, Moreno G, Plieninger T (2016) Assessing linkages between ecosystem services, land-use and wellbeing in an agroforestry landscape using public participation GIS. Applied Geography 74: 30-46.
Plieninger T, Levers C, Mantel M, Costa A, Schaich H, Kuemmerle T (2015) Patterns and drivers of scattered tree loss in agricultural landscapes: Orchard meadows in Germany (1968-2009). PLOS ONE 10(5): e0126178.
Schaich H, Kizos T, Schneider S, Plieninger T (2015). Land change in Eastern Mediterranean wood-pasture landscapes: the case of deciduous oak woodlands in Lesvos (Greece). Environmental Management 56: 110-126.
Sereke F, Dobricki M, Wilkes J, Kaeser A, Graves AR, Szerencsits E, Herzog F (2016). Swiss farmers don't adopt agroforestry because they fear for their reputation. Agroforestry Systems 90:385–394.

7.6 Upscaling the landscape results (started)

Objective 7.6 is to upscale the findings to assess the potential of agroforestry at national and European scales, and to provide guidance for agroforestry policy development. This activity (Task 7.6) builds on the work being undertaken by EFI in work-package 1. A scenario framework has been defined and synthesised in Milestone 34 (Table 7.8).

Table 7.8. Reference for Milestone 34

den Herder M, Herzog F, Graves A, Palma J, Ferreiro Dominguez N, Mosquera-Losada MR (2016). Milestone 34 (7.4). Definition of Scenario Framework. 21 March 2016. 14 pp.

7.7 Co-ordination of the work-package (on-going)

Tobias Plieninger has led Task 7.7, which is to co-ordinate and the synthesise work-package 7, and he (or a deputy) has attended the monthly Executive Board meetings. A one-day work-package 7 workshop was held prior to the Second General Assembly at Chania on 23 June 2015, and this was attended by staff from each work-package 7 partner except UBB. A work-package 7 workshop was also held in Rennes in January 2016 and during the Third General Assembly in Montpellier (26 May 2016).

7.8 Use of resources in work-package 7

At the end of June 2016, 95.77 person months had been allocated to work-package 7, equivalent to 77% of the budgeted total (Table 7.9). INRA has exceeded its planned person-month input. As agreed in the initial contract, INRA (unlike other partners) has funding arrangements that allows it to allocate more person months and resources to work-packages than will be directly funded by the European Commission. INRA has confirmed that their exceedance of the financial budget within AGFORWARD and the exceedance of the work-person budget will not undermine their capacity to ensure their delivery of project milestones and deliverables in the final period of the project.

Table 7.9. Person-month inputs to work-package 7

	First period (Jan-Dec 2014)	Second period (Jan 2015 to Jun 2016)	Sub-total	Project budget
UCPH	15.00	14.49	29.49	35
FDEA	2.95	19.43	22.38	28
INRA	8.18	6.44	**14.62**	11
UEX	1.50	9.60	11.10	10
UBB	0.71	4.31	5.02	10
EFI	0.33	2.92	3.25	9
CRAN	0.71	0.69	1.40	**7.42**[a]
ISA	1.00	2.50	3.50	6
USC	0.50	1.94	2.44	3
ACTA	1.26	1.31	2.57	**2.16**[a]
TEI	0.00	0.00	0.00	**1.42**[a]
ICRAF	0.00	0.00	0.00	1
Total	**32.14**	**63.63**	**95.77**	**124**

[a]:2.84 person-months of the budget for ACTA (which was reduced from 5 to 2.16) was reallocated to Cranfield (which increased from 6 to 7.42) and to TEI (which increased from 0 to 1.42)

7.9 Issues and actions

Whilst a full draft of Milestone 33 has been completed, some partners are re-adapting the sample areas during the field work; hence a final report has not been released on the website.

8 Work package number 8

Work-package number	**8**
Work-package name	**Policy**
Leader	Rosa Mosquera-Losada
Organisation	University of Santiago de Compostela
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 8

Professor Rosa Mosquera-Losada is leading work-package 8 which focuses on policy. Since June 2014, Rosa has also been the President of the European Agroforestry Federation, which also plays a key role in this work-package. The key activity during the reporting period has been the analysis of policy measures (Table 8.1), but there is a delay on the recent policy report.

Table 8.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 8 from month 12 to month 30 (indicated in orange), and the plan until month 36 (indicated in grey).

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP8 Agroforestry policy development																									
T8.1 Recent policy (D8.23)					**D**																				
T8.2 Policy scenarios for WP7 (MS37)											**M**														
T8.3 Analyse policies to produce map (MS36) and recommendations (D8.24)			**M**																						
T8.4 Co-ordinate WP8																									

Table 8.2. Summary of the status of milestones and deliverables in work-package 8 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	**Due date**	**Status**
Second reporting period		
MS36: Map of policies	Feb 2015	Completed
D8.23: Report on policy measures	Apr 2015 delayed to October 2015	**Draft completed but not yet internally approved; to be submitted before 30 Sept 2016**
MS37: Policy scenarios for WP7	Oct 2015	Completed
Third reporting period (on-going)		
D8.24 Report on appropriate policy	June 2017	Started

8.1 Current extent of agroforestry policy measures (Almost complete)

Objective 8.1 is to describe the current extent of agroforestry measures across the EU. To achieve this (Task 8.1), the project partners have identified the key European agroforestry policy measures affecting European countries. An article specifically working with measure 222 (Agroforestry Establishment in Agricultural Lands) of Pillar II, has been drafted in comparison with measures 221 and 223 in collaboration with the Italian team led by Andrea Pisanelli (Table 8.3). Pisanelli et al. (2014) highlights that in the 2007-2013 rural development programme the uptake of measure 222 was low, with only 3.4% of the resources allocated to measure 222 being spent. Pisanelli et al. related to low implementation rate "*to i) lack of knowledge and awareness of farmers, consultants and managing authorities concerning agroforestry, ii) the limited range of agroforestry systems that was supported by the measure (only silvoarable systems for timber or biomass production)…, iii) the lack of funding to cover management costs of the systems, and iv) the conflict between the measure 222 and other CAP instruments such as the single farm payment, according to which the presence of trees reduces the amount of direct farm payments*"

Following internal discussion during 2014, it was agreed that a report on the extent and success of current policy measures to promote agroforestry should also consider the wider impacts of Pillar I in the Common Agricultural Policy (CAP) and also of a wider range of measures within Pillar II of the CAP. As recorded in the last Progress Report, it was recommended to delay the delivery of this report (Deliverable 8.23) from April 2015 to October 2015 so that it could also include the measures being adopted within the 2014-2020 Rural Development Programmes.

Table 8.3. Member of the AGFORWARD consortium have produced papers on agroforestry and the Common Agricultural Policy at the Second and the Third European Agroforestry Conferences

Pisanelli A, Marandola D, Marongiu S, Paris P, Rosati A, Romano R (2014). The role of rural development policy in supporting agroforestry systems in EU. In: 2nd European Agroforestry Conference Book of Abstract (Eds. Palma JHN et al.) Cottbus, Germany 4-6 June 2015.
Lawson GJ, Balaguer F, Palma JHN, Papanastasis V. (2016). Options for agroforestry in the CAP 2014-2020. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 424-427 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.
Mosquera-Losada MR, Santiago-Freijanes JJ, Pisanelli A, Lamersdorf N, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Ferreiro-Dominguez N, Rigueiro-Rodriguez A. (2016). Agroforestry in the CAP: Eligibility. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 431-432 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.
Mosquera-Losada MR, Santiago-Freijanes JJ, Pisanelli A, Moreno G, den Herder M, Lamersdorf N, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Ferreiro-Dominguez N, Rigueiro-Rodriguez A. (2016). Agroforestry in the CAP: Cross-compliance or conditionality. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 433-435 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.
Mosquera-Losada MR, Santiago-Freijanes JJ, Rois M, Moreno G, Pisanelli A, Lamersdorf N, den Herder M, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Rigueiro-Rodriguez A. (2016). CAP and agroforestry practices in Europe. In: 3rd European Agroforestry Conference Book of Abstracts, pp. 428-430 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.

Rosa Mosquera-Losada presented an update on Deliverable 8.23 at the Executive Committee Meeting in Copenhagen on 4 December 2015 and a draft of the report was produced on 16 December 2015. This included a classification of agroforestry in a policy context, an appraisal of wider agroforestry measures in the 2007-2013 rural development regulation, and an initial outline of agroforestry-related measures in the 2014-2020 rural development regulations. A second version of the report was presented on 23 April 2016 and Rosa led a workshop on agroforestry policy at the Third General Assembly at Montpellier on 26 May 2016. Analyses of European policy related to agroforestry were also presented as papers at the Third European Agroforestry Conference in May 2016 (Table 8.3). An updated version of Deliverable 8.23 was produced on 3 June 2016, and Skype meetings were subsequently held to discuss the most appropriate way of framing agroforestry in a policy context.

It was the intention that a final version of Deliverable 8.23 could be uploaded to the EC portal before 31 August 2016. Unfortunately the capacity to submit the report on time has been confounded by Rosa Mosquera-Losada suffering from a physical injury on 11 August 2016. The report is almost ready for submission to the EC but it has become apparent that some of the calculations need to be re-checked and the report needs final internal review and approval. The report considers a wide range of measures that support agroforestry in the 2007-2013 rural development programme and the 2014-2020 rural development programmes for 90 (out of a potential 118 regions/member states). The intention is to submit the report with the information that is available rather than waiting for the remaining 28.

The Co-ordinator confirmed the remaining actions with the work-package 8 leader on 31 August 2016 and the report will be discussed at AGFORWARD Executive Committee on 8 September 2016. We plan that the report will be submitted to the EC portal before 30 September 2016.

Table 8.4. Reference for Deliverable 8.23 on the extent and success of current policy measures to promote agroforestry across Europe. A draft report has been produced, and it is anticipated that it will be ready for submission to the EC portal by 30 September 2016.

Mosquera-Losada RM, Santiago Freijanes JJ, Pisanelli A, Rois M, Ruiz Mirazo J, Smith J, den Herder M, Moreno G, Garcia de Jalon S, Lamersdorf N, Ferreiro Domínguez N, Balaguer F, Pantera A, Chalmin A, Garnett K, Rigueiro-Rodríguez A, Gonzalez-Hernández, Fernández-Lorenzo J, Romero-Franco R, Burgess PJ (2016). **Draft** of Deliverable 8.23 (8.1): Extent and success of current policy measures to promote agroforestry across Europe. 30 August 2016. 100 pp.

8.2 Policy scenarios for scaling-up exercise (completed, but under review)

Task 8.2 is to recommend policy scenarios for the scaling-up exercise in work-package 7. This work is was due to start in June 2015 for completion in December 2015. Some policy scenarios were discussed and agreed during the Third General Assembly in Montpellier (26-27 May 2016) and these have been reported in a brief report (Milestone 37) on the AGFORWARD intranet (Table 8.5). One of the scenarios proposed is an environment-driven scenario to determine the impact on carbon sequestration and the implementation of LULUCF regulations mandating 50, 100 or 200 trees per ha on arable and grassland. A second scenario is to determine the economic and financial benefits of increasing the agroforestry area on farms by an additional 20%.

Table 8.5. Reference for Milestone 37

Mosquera-Losada RM, den Herder M, Herzog F, Plieninger T, Santiago-Freijanes JJ, Ferreiro Domínguez N, Burgess PJ (2016). Milestone 37 (8.2): Definition of Policy Scenarios to be used in WP7. Report for AGFORWARD project. 30 June 2016. 4 pp.

8.3 Guidance on future policy developments (started)

Objective 8.3 is to provide guidance on how future policy development could help optimise the contribution of agroforestry to sustainable rural development. To aid this process, staff at EURAF and USC created a series of maps to illustrate agroforestry policies across Europe (Milestone 36). These maps have been made available on the AGFORWARD website (Table 8.6).

Table 8.6. Reference for Milestone 36

Santiago-Freijanes JJ, Mosquera-Losada MR, Pisanelli A, Ferreiro-Domínguez N, González-Hernández MP, Fernández-Lorenzo JL, Romero-Franco R, Rigueiro-Rodríguez A and Burgess P.J. (2016). Maps and indicators of rural development measures potentially related to agroforestry, across the EU (2007-2013). Milestone 36 for EU FP7 Research Project: AGFORWARD 613520. (14 January 2016). 28 pp. http://www.agforward.eu/index.php/en/maps-and-indicators-of-rural-development-measures.html

Staff associated with the European Agroforestry Federation have been playing an active role in improving the development and implementation of policies related to agroforestry across Europe. Rosa Mosquera Losada is currently President of the European Agroforestry Federation and she has attended various meetings across Europe to improve European policies affecting agroforestry. The work within work-package 8 will result in a report (Deliverable 8.24) on how policy can promote the appropriate use of agroforestry across Europe in June 2017.

8.4 Co-ordination of the work-package (on-going)

Rosa, as leader of work-package 8, has continued to actively contribute to regular Executive Committee Meetings. She also led workshops at the Second General Assembly in Chania, Greece and at the Third General Assembly in Montpellier (26 May 2016).

8.5 Use of resources in work-package 8

At the end of June 2016, 25.94 person months had been allocated to work-package 8, equivalent to 44% of the total. This is in line with expectations as the key tasks take place during the final three-quarters of the project.

Table 8.7. Person-month inputs to work-package 8

	First period (Jan to Dec 2014)	Second period (Jan 2015 to Jun 2015)	Sub-total	Project budget
USC	1.70	11.30	13.00	16
EURAF	2.60	0.90	3.50	12
ORC	0.15	0.76	0.91	6
AFAF	0.12	0.79	0.91	5
EFI	0.76	0.96	1.72	2
ISA	0.50	0.55	1.05	2
CNR	0.50	0.75	1.25	2
TEI	0.26	0.75	1.01	2
CREA	0.25	0.25	0.50	2
BTU	0	0	0	2
UCPH	0	0	0	2
UEX	0.10	0.60	0.70	1
NYME	0.08	0.26	0.34	1
Wervel	0.07	0.08	0.15	1
LBI	0	0.48	0.48	1
UBB	0	0	0	1
ICRAF	0	0	0	1
AFBI[a]	0.01	0.41	0.42	0.5
Total	**7.10**	**18.84**	**25.94**	**59.5**

[a]: The WP8 person months for AFBI in the first period has been corrected to 0.01 from 0.00.

8.6 Issues and actions

Members of the AGFORWARD consortium have been playing an active role in the development of agroforestry policy across Europe. However the Second Reporting Period has seen delays in the creation of Deliverable 8.23; some of this has been the result of problems in obtaining information regarding the 2014-2020 Rural Development Programmes in some countries and a recent injury experienced by the work-package leader.

The AGFORWARD project is pleased that Dr Gerry Lawson, who has experience in the development of European agroforestry policy, has agreed to be an External Expert to the project. Gerry has already contributed to one policy-related discussion. The intention is submit Deliverable 8.23 to the EC portal before 30 September 2016, and the Co-ordinator of the AGFORWARD project is working with the work-package leader to ensure this.

9 Work package number 9

Work-package number	**9**
Work-package name	**Dissemination**
Leader	Fabien Liagre
Organisation	AGROOF
Report period	1 January 2015 to 30 June 2016

Fabien Liagre, from AGROOF, is leading the dissemination work package, which has three objectives: Objective 9.1: to promote agroforestry systems; Objective 9.2: to raise awareness of agroforestry in training programmes, and Objective 9.3: to encourage effective use of knowledge through exchange. These three objectives are implemented through seven tasks (Table 9.1). This work-package is delivering a steady stream of milestones and deliverables (Table 9.2).

Table 9.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 9 for month 12 to month 30 (indicated in orange), and plan until month 36 (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP9 Dissemination																									
T9.1 Establish engagement protocol (M38) (Completed in first period)																									
T9.2 Establish (D9.25) web platform and produce updates (M39)	M			M			M			M			M			M			M			M			M
T9.3 Produce material for groups maps of network (D9.26), associations (D9.28), literature (D9.30)	D						D						D												
T9.4 Stakeh'r communication (M40)	M						M						M						M						M
T9.5 Produce research (D9.27) and education tools (D9.27, D9.29)							D												D						
T9.6 Coordinate conference (D9.31)																									
T9.7 Co-ordinate WP9																									

Table 9.2. Summary of the status of milestones and deliverables in work-package 9 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	**Due date**	**Status**
First reporting period		
M38 Dissemination protocol	Mar 2014	Completed
D9.25 Interactive platform	June 2014	Completed, although on-going
D9.26 Agroforestry map	Dec 2014	Completed
Second reporting period		
M39 Quarterly website updates	Quarterly	Completed to date
M40 Quarterly newsletter	Quarterly	Completed to date
D9.27 Web-application of Yield-SAFE and Farm-SAFE models	June 2015	Completed (first version on-line)
D9.28 National associations	December 2015	Completed
D9.29 Education tool	June 2015	Completed (although on-going)
Third reporting period		
D9.30 Booklet	July 2017	On-going

9.1 Dissemination and stakeholder engagement protocol

The first activity (Task 9.1) of this work-package was to develop a dissemination and stakeholder protocol. The dissemination protocol (Milestone 38) was completed in April 2014 and was reported in the First Progress Report.

9.2 Interactive internet platform

The second activity (Task 9.2) was to develop an interactive internet platform detailing how agroforestry can provide social, environmental, and economic benefits. This already includes videos, pdf documents, booklets, and links, and there is also a plan to include audio documents and special web pages for market-driven products. The focus between June 2015 and June 2016 has been the uploading of milestones and deliverables including the system reports from each stakeholder group.

Since the 12 month progress report, the top pages of the www.agforward.eu have been translated into each of 11 languages. Agroof has organized the translation for the non-English speaking countries: a tutorial to access the website backend and insert the translation was sent to appropriate partners (Figure 9.1). Polish has been identified as a twelve language although it has not yet started.

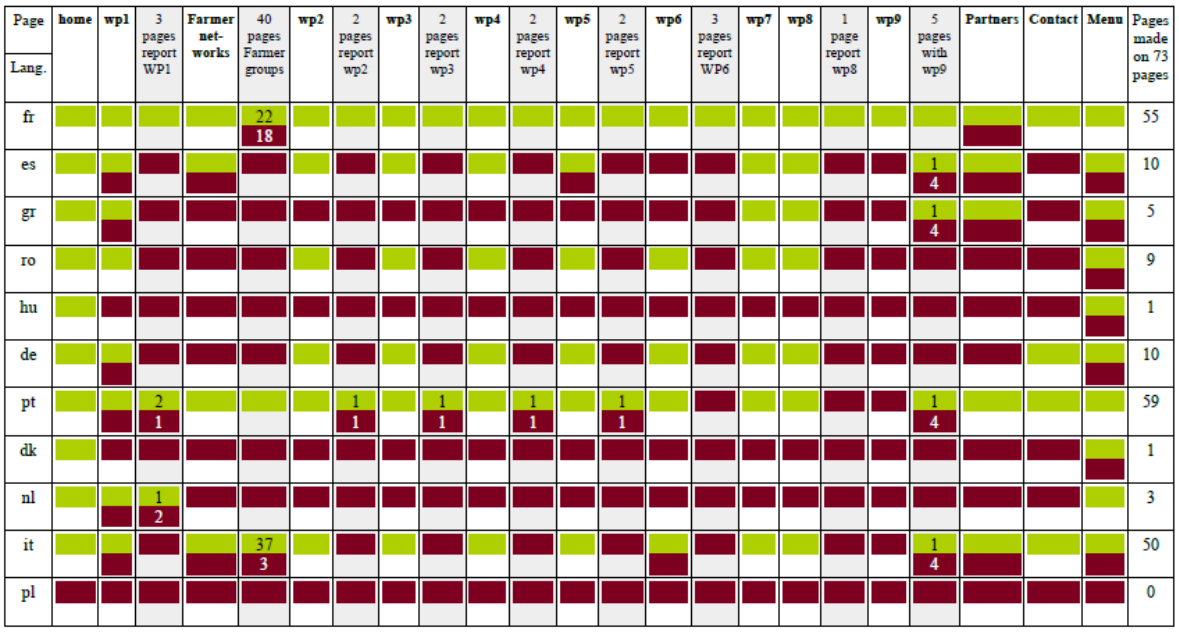


Figure 9.1. Green shading indicates the completion of translation of web-pages on the AGFORWARD website (www.agforward.eu). The highest level of translation has been into Portuguese, French, and Italian.

News items: Cranfield and AGROOF have ensured approximately monthly updates to the web-page including the news item page (http://www.agforward.eu/index.php/en/news.html) (Table 9.3).

Table 9.3. Updates made to the news pages between month 12 and month 30

Date	Description of news item
15 Jan 2015	New report on agroforestry in Mediterranean Partner Countries
15 Feb 2015	New on-line map of European agroforestry research & demonstration
27 Feb 2015	AGFORWARD Progress Report
20 Mar 2015	Acorn Festivals in Greece
20-21 Mar 2015	Des Arbres en Agriculture Conference in Paris
28 Apr 2015	Preliminary stratification of agroforestry
18-19 May 2015	Woodfuel from agroforestry in UK
2 Jun 2015	Wood pasture in Romania
1-3 Jun 2015	North American Agroforestry Conference
23-26 Jun 2015	Second General Assembly
13-17 Jul 2015	World Congress on Integrated Crop-Livestock-Forest Systems
3-5 Sept 2015	Agroforestry at CEST 2015
12 Sept 2015	Agroforestry at EXPO2015
17 Nov 2015	Wood pastures and the CAP
9 Dec 2015	Education in Agroforestry
17 Dec 2015	Release of the French National Agroforestry Plan
7 Jan 2016	Agroforestry at Oxford Real Farming Conference
25 Jan 2016	New report on extent of agroforestry
28 Jan 2016	Agroforestry and a strategic approach to EU agricultural research
22-28 Feb 2016	Modelling workshop in Portugal
23-25 May 2016	Third European Agroforestry Conference
26-27 May 2016	Third General Assembly
31 May 2016	Tree fodder in Romania
13-14 Jul 2016	Agroforestry at International Farming Systems Association Conference

During the first year, there were 19,000 page visits to the AGFORWARD website. In 2015 this increased to 58,000, and in the year to 2016, the total number of visits has been 25,000 (Figure 9.2).

Figure 9.2. Proportion of new visitors for the website: one third of the visitors are returning visitors which indicates that many are engaged with the progress of AGFORWARD.

9.3 Literature and guidance for specific user groups

The third task (Task 9.3) is wide-ranging focusing on developing literature and guidance for specific groups. This includes i-ii) farmers, land owners and businesses, iii) national agroforestry communities and iv) researchers, policy makers, and extension staff.

9.3.1 Farmers, landowners and businesses

Such groups are already benefiting from the stakeholder groups and meeting reports that are available through the AGFORWARD website. The production of a series of booklets (Deliverable 9.30) by August 2017 is a key output of the project and during 2015 a working group has been established in line with the dissemination protocol (Milestone 38). The format of the reports was a key item discussed at the Third General Assembly and the current plan is to create a portfolio of relatively short reports. The delivery of these reports will be a key focus during the Third Reporting period, and ACTA (IDF) is playing a lead role.

9.3.2 National agroforestry communities

One of the deliverables (Deliverable 9.28), due in December 2015, was an expansion to twelve national agroforestry associations across Europe. A webpage has been created to help this, used for locating the contact details and the statutes of each association (Figure 9.3). A video from AGROOF to facilitate national and local meetings by associations is provided next to the inter-active map. A brief report has been uploaded to the EC Portal to confirm the expansion to twelve national agroforestry associations (Table 9.4). A list of the associations is presented in Table 9.5.

Table 9.4. A brief report confirming completion of Deliverable 9.28 (the expansion to 12 national agroforestry associations) has been uploaded to the EC portal

Liagre F, Le Gallic H, Mosquera Losada MR, Lamersdorf N, Watté J, Malignier N, Burgess PJ (2016). Deliverable 9.28 (9.4): Expansion to 12 national agroforestry associations across Europe. 20 December 2015. 4 pp.

Figure 9.3. Screen shot of the web page for the national associations. On the map, all the associations are located with their contact available. On the right, you have the movie presenting stakes and perspectives for Agroforestry in Europe and the different links for the CAP regulation.

Table 9.5. List of national associations and groups as of 30 June 2016

Country	Name	Website link (where available)
	European Agroforestry Association	http://www.agroforestry.eu/
Belgium (Wallonia and Brussels)	AWAF (Association pour l'Agroforesterie en Wallonie et à Bruxelles)	http://www.awaf.be/
Czech Rep	CSAL (Cesky Spolek Pro Agrolesnictvi)	http://agrolesnictvi.cz/
France	AFAC agroforesteries	http://afac-agroforesteries.fr/
	AFAF (Association Française d'Agroforesterie)	http://www.agroforesterie.fr/index.php/
Germany	AG Agroforst Deutschland	http://www.agroforst.org/
Greece	HAN (Hellenic Agroforestry Network) (Ελληνικό Αγροδασικό Δίκτυο)	http://www.agroforestry.gr/pages/
Italy	AIAF (Associazione Italiana di Agroforestazione)	http://www.agroforestry.it/
	SISEF - Società Italiana di Selvicoltura ed Ecologia Forestale	https://sisef.org/
the Netherlands	Stichting Agroforestry Nerdeland (Foundation Agroforestry Netherlands)	http://agro-forestry.nl/
Poland	OSA - Ogólnopolskie Stowarzyszenie Agroleśnictwa	http://www.agroforestry.pl/
Portugal	CEF (Centro de Estudos Florestais)	http://www.isa.ulisboa.pt/en/cef/about
Spain	AGFE (Asociacion Agroforestal Espanola)	
Sweden	Agroforestry Sverige	http://agroforestry.se/
UK and Ireland	Farm Woodland Forum	http://www.agroforestry.ac.uk/

9.3.3 Researchers, extension staff, and policy makers

An initial useful resource for researchers is a European map of the participative research and development networks (Deliverable 9.26), as reported in the First Progress Report. AGROOF created the structure of the map in December 2014, and a map of stakeholder groups was released on the website on 11 February 2015. During 2016, the project has updated the map with details of agroforestry experimental and demonstration plots both within AGFORWARD and within the wider community.

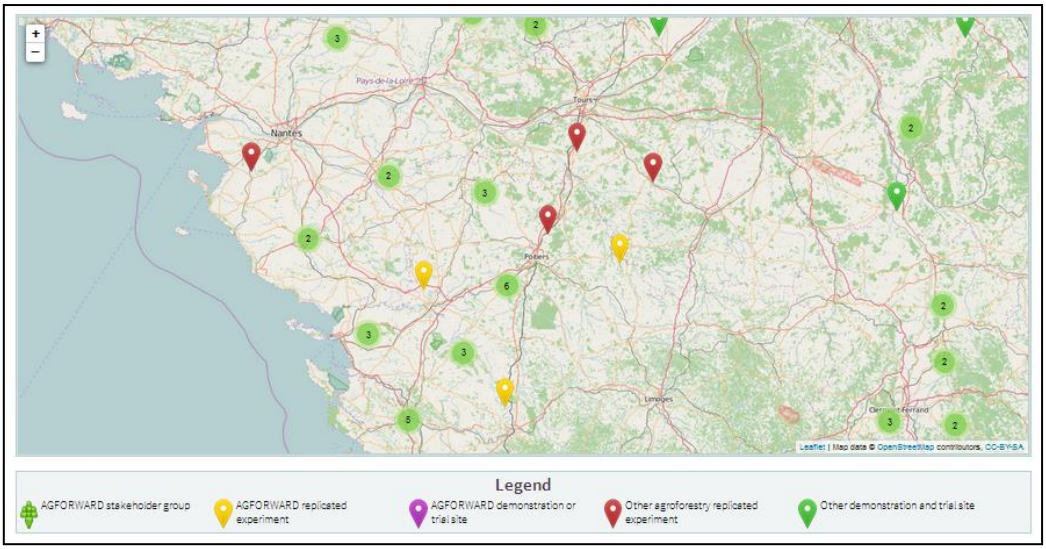


Figure 9.4. Screen shot of the on-line map showing the location of stakeholder groups and agroforestry research and demonstration sites. The site also now includes relevant sites external to AGFORWARD, but which are useful for agroforestry research and demonstration http://www.agforward.eu/index.php/ro/map-of-agroforestry-research-and-demonstration-in-europe.html

One of the key outputs for researchers is a web-application of the Yield-SAFE and Farm-SAFE models (Deliverable 9.27). ISA, AGROOF, and CRAN have been working together to develop the Yield-SAFE and Farm-SAFE models and a downloaded version of Farm-SAFE which links to a web-based version of Yield-SAFE was made available on the AGFORWARD website in June 2016 (Table 9.6). A brief report has also been uploaded to the EC portal. Whilst the current version is working, it is planned that there will still be an update of the VBA design to further facilitate its use with end-users such as farmers. In addition, AGROOF are proposing a series of questions and answers to help guide users. The intention is that this addition will be completed by December 2016.

Table 9.6. Reference for Deliverable 9.27, and a brief report uploaded to the EC research portal confirming the deliverable.

Graves A, Palma J, Garcia de Jalon S, Crous-Duran J, Liagre F, Burgess PJ. (2016). Deliverable 9.27 (9.3) Web-application of the Yield-SAFE and Farm-SAFE Model: Farm-SAFE_Jun2016. Microsoft Excel worksheet model developed as part of the AGFORWARD project. 40 MB. June 2016. http://www.agforward.eu/index.php/en/web-application-of-yield-safe-and-farm-safe-models.html
Graves A, Palma J, Garcia de Jalon S, Crous-Duran J, Liagre F, Burgess PJ. (2016). Deliverable 9.27 (9.3) Web-application of the Yield-SAFE and Farm-SAFE Model. 25 July 2016. 3 pp.

AGFORWARD staff have also been disseminating the outputs from the AGFORWARD project through a wide range of conferences and workshops (Table 9.7). The Third European Agroforestry Conference in May 2016 is described in Section 9.6. During the period 1 January 2015 to 30 June 2016, AGFORWARD staff have been instrumental in 8 TV interviews, 91 oral presentations, 17 poster presentations, 19 newsletter articles, and at least 18 workshop activities (in addition to the stakeholder groups), and eight training activities (Table 9.8).

Table 9.7. Selected key conferences and workshops attended by AGFORWARD staff between January 2015 and June 2016

Date	Description
10-11 Feb 2015	EC-AGRI on “Research on Climate Change and Agriculture" in Brussels
25 Feb 2015	Rural Networks' Steering Group of the ENRD, Brussels,
6 March 2015	EU Workshop on “Promoting climate mitigation on agricultural and forest land through the CAP” in Brussels,
10 March 2015	Subgroup on innovation of the European Rural Networks' Assembly, Brussels
15 March 2015	Global Research alliance animal health and greenhouse gas emissions. Intensity Network workshop Montpellier
16-18 March 2015	The 3rd global science conference on climate-smart agriculture , Montpellier
21 March 2015	Des Arbes en Agriculture, L’Agroforesterie au Coeur des Enjeux Contemporains, Paris.
26 March 2015	1st ENRD Seminar on ‘Increasing stakeholder involvement in rural development’, Brussels
12-16 April 2015	EGU conference, Vienna,
6 May 2015	ISPRA National Conference, Milan, Italy
18 May 2015	Farm Woodland Forum Meeting at the Organic Research Centre in the UK
1 June 2015	North America Agroforestry Conference at Ames, Iowa, USA.
15 June 2015	International Congress of European Grassland Federation, Wageningen, NL
18 June 2015	Sustainable Management of the Dehesa, Salamanca, Spain
14 July 2015	World EXPO, Milan.
17 July 2015	World Congress on Integrated Crop-Livestock-Forest Systems, Brasilia, Brazil
9-11 Sept 2015	Managing Landscape Change and Future Ecologies, Sheffield, UK
12 Sept 2015	Agroforestry Event at EXPO 2015, Milan, Italy
15-18 Sept 2015	10th SISEF Conference, Florence, Italy
15 Dec 2015	International workshop on Mediterranean Agro-silvopastoral Systems, Sassari, Italy
7 Jan 2016	Oxford Real Farming Conference, Oxford, UK
28 Jan 2016	Designing the Path: a Strategic Approach to EU Agricultural Research and Innovation, Brussels.
23-25 May 2016	Third European Agroforestry Conference, Montpellier, France
21-22 Jun 2016	V Reunión del Grupo de Trabajo sobre Sistemas Agroforestales de la Sociedad Española de Ciencias Forestales (SECF), Solsona, Spain
22 Jun 2016	Farm Woodland Forum Meeting, Ballyhaise College, Ireland

Table 9.8. List of the key dissemination activities of the AGFORWARD project by type of activity and then date order.

Types of audience: SC: scientific community (higher education, research), I: Industry; CivS: Civil society; Pol: Policy makers; M: Media, Ed: students and teachers

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
Website/social media								
103	Web site	AGROOF and CRAN	Continuation of AGFORWARD website www.agforward.eu From Jan 15 to Jun 2016, we had 83,000 page visits equivalent to 150 page visits per day	On going	International	SC, I, CivS, PM, M	150 per day	Global
104	Website	AGROOF	Continuation of AGFORWARD Facebook site https://www.facebook.com/AgforwardProject	On going	France	SC, I, CivS, PM, M		Global
105	Web site/photo collection	EFI/ISA	Continuation of AGFORWARD Flickr site: https://www.flickr.com/photos/agforward	On going	International	CivS	> 1000	Global
106	National web site	Veneto	Continuation of Italian agroforestry website: www.agroforestry.it	On going	It	I, CivS, PM, M	> 1000	Italy
107	National web site	LBI	Continuation of Dutch agroforestry website: www.agro-forestry.nl	On going	NL	I, CivS, PM, M	> 1000	Belgium, The Netherlands
Conference organisation								
108	Farm Woodland Forum Meeting	ORC	Hosting the 2015 Farm Woodland Forum Annual General Meeting and organising a field visit to our agroforestry trial site at Elm Farm.	18-19 May 2015	Newbury, UK	SC, PM	50	UK, Ireland
109	AGFORWARD-EURAF event at EXPO 2015 Milan	EURAF, VENETO	Organisation of Agroforestry Day at EXPO2015: Agroforestry: sustainably feeding the planet and providing energy	12 Sept 2015	EU Pavilion, Milan, IT	SC, I, PM	50	Europe, Italy
110	ORC Producer conference session	ORC	'Can tree planting on livestock farms lead to a net increase in productivity and profit?'	27-28 Jan 2016	Bristol, UK	I, PM, SC, Ed	45	UK
111	Organizing and scientific committee of Third European Agroforestry Conference	EURAF	Celebrating 20 years of Agroforestry research in Europe	23-25 May 2016	Montpellier, FR	SC, I, CivS, PM, M	250	EU, USA, Canada, China.
Television								
112	TV program	INRA	« Silence ça pousse », Television program about	01 Jan 2015	France 5	General	600 000	France and

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			gardening with Fabrice Maurice, Agnès Sourisseau, Luc Picaut, Christian Dupraz Replay link : https://www.youtube.com/watch?v=jQaT0aMKrA0		Channel	Audience		French speaking countries
113	TV interview	INRA-Ferlus	Interview on the France 3 french TV presenting the planting of trees in the agroforestry plot designed by the stakeholders at INRA Lusignan. Poitou-Charentes Region, France	17 Feb 2015	France 3 TV	I, CivS, PM, M	100 000	France
114	TV interview	AGROOF	Interview for the national TV channel "France 2 Television". 4 min of interview for the midday TV news. (Vézénobres – France on TV + On line internet)	13 Feb 2015	France 2 TV	All audience	5 million	France
115	TV interview	AGROOF	Short sequence on an experimental sites for ARTE Channel (on TV + on line internet), Vézénobres - France	18 Feb 2015	ARTE Tv	All audience	2 million	France and Germany
116	TV news report	INRA	« La révolution de l'agroforesterie », TV report in the ARTE news with Christian Dupraz, Henri Breton, Denis Florès Replay link: http://info.arte.tv/fr/la-revolution-de-lagroforesterie	21 Feb 2015	ARTE Channel	General Audience	500 000	France, Germany
117	TV news report	INRA	« L'agroforesterie replante les arbres au milieu des cultures » TV report in the France 2 news with Denis Florès, Franck Renouard, Rémi Cardinael Replay link : http://www.francetvinfo.fr/economie/emploi/metiers/agriculture/l-agroforesterie-replante-les-arbres-au-milieu-des-cultures_832587.html	24 Feb 2015	France 2 Channel	General audience	2 million	France and French speaking countries
118	TV Interview	AGROOF	Interview for the BBC news from Beauvais, France	25 Feb 2015	Beauvais - Fra	All audience	5 million	UK
119	TV news report	INRA	"Agroforesterie, ou comment allier le rendement agricole au respect de la nature ? », TV news report on the harvest in our experimental plots	21/07/2015	France 2 TV	CivS	2 million	France

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			with Henri Breton, Christian Dupraz at Montpellier, Restinclières, Maraussan Replay links : http://www.francetvinfo.fr/replay-jt/france-2/13-heures/jt-de-13h-du-mardi-21-juillet-2015_998309.html Check at 19'48 http://www.francetvinfo.fr/monde/environnement/agroforesterie-ou-comment-allier-le-rendement-agricole-au-respect-de-la-nature_1008711.html					
Oral presentations								
120	Oral presentation to a scientific event	INRA-Ferlus	Novak, S. Agroforestry innovations to be evaluated for ruminant farmers in the frame of the AgForward project. Presentation at Casdar Arbele project kick-off meeting.	12 Jan 2015	Jalogny, France	SC, I	25	France
121	Oral presentation to a business/political event	EFI	den Herder, M. Sustainability and Climate Change Research at EFI: the AGFORWARD project: presentation to Dutch Ambassador and Dutch Honorary Consul in Finland (government representatives)	19 Feb 2015	Joensuu, Finland	CivS	5	The Netherlands
122	Oral presentation to a public meeting	AU	Kongsted, AG &Hermansen JE (2015). Er Agroforestry en mulig udviklingsvej i økologisk svine-og fjerkræproduktion (Can AF be seen as a development path for organic pigs- og poultry production?). Presentation at Organic Denmark, General Assembly	6 Mar2015	Vejle, Denmark	Organic producers, consumers and advisors	50	Denmark
123	Oral presentation to a scientific event	CREA	A. Rosati Presentation at AIAF (Italian Association for agoroforestry) General Meeting and workshop.	7 Mar 2015	Verona, IT	SC, I	15	Italy
124	Oral presentation to a scientific event :	INRA	Climate-Smart Agriculture Conference: Field visit of agroforestry Estate by the conference participants. Visit guided by C. Dupraz	19 Mar 2015	Montpellier, France	SC, PM	50	International
125	Oral presentation	ISA	Joao Palma presented: Bolota: O futuro de um alimento com passado	20 Mar 2015	Herdade do Freixo do	CivS	150	Portugal

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
					Meio - Foros de Val de Figueira			
126	Oral presentation to a scientific event	CRAN	Burgess, P.J., Graves, A.R. (2015). AGFORWARD: Création d'une Ressource Européenne pour l'Agroforesterie. Presentation at "Des Arbres en Agriculture, L'Agroforesterie au Coeur des Enjeux Contemporains"	21 Mar 2015	Université Paris Descartes, Paris	SC	300	France
127	Conference presentation	INRA-Ferlus	Novak, S. Innovating on cattle production, Lycée agricole de l'Oisellerie,	27 Mar 2015	Angoulême, France	I, Ed	75	France
128	Oral presentation to a professional event	AGROOF	Liagre, F. Conference LEGTA (Training center for farmers)	31 Mar 2015	Wintzenheim	I, Ed	100	France
129	Oral presentation to a public event	AGROOF	Liagre, F. Conference about Agroforestry Perspectives in France	11 April 2015	Florac (Lozère)	CivS, I	100	France
130	Oral presentation to a scientific event	INRA	Communication to the French "Académie d'Agriculture" by C. Dupraz	16 April 2015	Paris	SC	80	France
131	Oral presentation to a scientific event	USC	Mosquera-Losada MR, Santiago-Freijanes JJ, Ferreiro-Domíguez N, Rois M, Rigueiro-Rodríguez A, (2015). Reducing pollution in agricultura land, agroforestry and Common Agrarian Policy. EGU Conference	16 April 2015	Vienna, Austria	SC	1000	All Europe
132	Oral presentation to a scientific event	CNR	Paris P, Pisanelli A, Camilli F et al., Sistemi agroforestali per un nuovo uso del suolo ad alta valenza produttiva ed ecologica" (in Italian) [Agroforestry as a new land use system with high productive and Environmental Value]. ISPRA National Conference "Policies, Actions and Measures for Sustainable Land Use"	6 May 2015	Milan, Italy	SC, PM	150	Italy
133	Oral presentation to a scientific event	CRAN	Upson, M., Burgess, P.J., Morrison, J.I. (2015). Predicting ash growth in farm woodlands. Presentation at Farm Woodland Forum Annual General Meeting. Newbury UK	18 May 2015	Newbury, UK	SC, PM	50	UK, Ireland
134	Oral presentation to	AFBI	Lunny, R., McAdam, J.H., Douglas, G. (2015) Alley	18 May 2015	Newbury,	SC, PM, I,	50	UK, Ireland

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
	a scientific event		Coppice: An alternative land use system. Presentation at Farm Woodland Forum Annual General Meeting.		England	Ed		
250	Oral presentation to a scientific event	EVD	Jäger M., Herzog F. (2015) Agroforstnetzwerk Schweiz. Presentation to Extension officers	30 April 2015	Zürich, CH	I	20	Switzerland
135	Oral presentation to a scientific event	CRAN	Burgess, P.J., den Herder, M., Upson, M. (2015). Quantifying Agroforestry in Europe with a focus on the UK. Presentation at Farm Woodland Forum Annual General Meeting.	18 May 2015	Newbury UK	SC, PM, I, Ed	50	UK, Ireland
136	Oral presentation to a scientific event	CRAN	Upson, M., Burgess, P.J., Morrison, J.I. (2015). Predicting ash growth in farm woodlands. Presentation at Farm Woodland Forum Annual General Meeting.	18 May 2015	Newbury UK	SC, PM, I, Ed	50	UK, Ireland
137	Oral presentation to a scientific event	BTU	Mirck, J., Burgess, P.J., den Herder, M. (2015). Agroforestry in Europe and the European Agroforetsry Federation. Presentation (key note) at North American Agroforestry Conference.	1 Jun 2015	Ames, Iowa, USA	SC, PM, practitioners	120	USA, Canada
138	Oral presentation to a scientific event	EFI	den Herder, M., Rois, M., Lovrić, M. Quantifying Agroforestry in Europe and understanding its context. Presentation for the EFI Scientific Advisory Board – REPSCO meeting	3 June 2015	Joensuu, Finland	SC	20	Europe
139	Oral presentation to a scientific event	LBI	Luske, B., N.J.M. van Eekeren. 2015. Potential of fodder trees in high-output dairy systems. International Congress of European Grassland Federation p. 250-252. *In* EGF 2015. Wageningen, The Netherlands. 15-17 June 2015. http://www.louisbolk.org/nl/publicaties/publicatie/?pubID=3024	15 Jun 2015	Wageningen, NL	SC	1000	Europe
140	Oral presentation to a scientific event	UCPH	Fagerholm, N., Plieninger T., Bieling, C., Bürgi, M., Garcia Martin, M. Eliciting landscape values through participatory mapping and oral histories. 6th Nordic Geographers Meeting.	17 Jun 2015	Tallinn & Tartu, Estonia	SC	30	International
141	Oral presentation to an extension event	UEX	Fernando Pulido (2015). Title: Contexto actual y tendencias en la gestión de la dehesa. Event:	18 Jun 2015	*Ciudad Rodrigo,*	I, PM		

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			Workshop Life "Gestión sostenible en ecosistemas mediterráneos: la Dehesa" (*Sustainable Management of the Dehesa*)		Salamanca, Spain			
142	Oral presentation to an extension event	UEX	Gerardo Moreno (2015). Title: Importancia del suelo para la produccion y conservación de la dehesa. Event: *Workshop Life "Gestión sostenible en ecosistemas mediterráneos: la Dehesa" (Sustainable Management of the Dehesa)*.	18 Jun 2015	Ciudad Rodrigo, Salamanca, Spain	I, PM		
143	Oral presentation to an extension event	UEX	Fernando Pulido (2015). Title: Producción y Aprovechamiento de la Bellota (Acorn production and market opportunities) Event: *Workshop "El agroecosistema Dehesa: presente, amenazas y desarrollo"* (*The Dehesa agroecosystem: present, threats and innovations*)	18 Jun 2015	Ciudad Rodrigo, Salamanca, Spain	I, PM		
144	Oral presentation to an extension event	UEX	Gerardo Moreno (2015). Title: Pastos y Cultivos. Mejoras Productivas (Improving the productivity of pastures and fodder crops in the dehesa) Event: *Workshop "El agroecosistema Dehesa: presente, amenazas y desarrollo"* (*The Dehesa agroecosystem: present, threats and innovations*)	18 Jun 2015	Ciudad Rodrigo, Salamanca, Spain	I, PM		
145	Oral presentation to a scientific event :	INRA	European weed science Conference: Field visit of agroforestry Estate by the conference participants. Visit guided by C. Dupraz	25 Jun 2015	Montpellier	SC, PM	60	International
146	Oral presentation to an extension event	UEX	Gerardo Moreno. Title: "Forestería y Recursos Forestales. Sistemas Agroforestales". Event: II Encuentro Internacional de Agroecología y Tradiciones Rural	July 2015	Espinosa de los Monteros, Burgos, Spain	I	>100	Spain
147	Oral presentation to a scientific event	BTU	Freese D*, Mirck J, Böhm C, Graves A. 2015. The potential role of agroforestry in tackling climate change and food security. World EXPO Milan, Climate change and food security: challenges for plant health, plant breeding and genetic resources.	14 July 2015	Milan, Italy	SC, I, PM	200	Europe

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
148	Oral presentation to a scientific event	CRAN	Burgess, P.J., Graves, A.R., Palma, J.H.N., Crous-Duran, J., Upson, M. (2015). Financial and economic benefits of integrated crop-livestock-tree systems in Europe. Presentation at World Congress of Integrated Crop-Livestock-Forest Systems	17 Jul 2015	Brasilia, Brazil	SC, I, Pol	300	Brazil, USA, Argentina, Chile, UK, Kenya, Mexico, Canada.
149	Oral presentation to a scientific event	TEI	A. Pantera, P.J. Burgess, R. Mosquera-Losada, G. Moreno, N. Corroyer, J. McAdam, A. Rosati, A. et al. 2015. Farmers' perspective on the opportunities and challenges of high value tree agroforestry systems. Proceedings of the 14th International Conference on Environmental Science and Technology,	3-5 Sept 2015	Rhodes, Greece			Greece
150	Oral presentation to a scientific event	AFBI	McAdam, J. (2015) Silvopasture as a sustainable land use in a partially *re-wilded* landscape. In Rotheram, I.& Handley C. (Eds) Managing Landscape Change and Future Ecologies. Conf Abstracts p11, Full paper pp 81-91.	9-11 Sept 2015	Sheffield, England	SC, PM	70	UK, Ireland
151	Oral presentation at Scientific event	CRAN	Burgess, P.J. (2015). The AGFORWARD Project. Presentation at the Agroforestry Event at EXPO 2015, Milan, Italy	12 Sept 2015	Milan	SC, I, Pol	30	Italy, France, Spain
152	Oral presentation to a scientific event	CNR	Sabatti M, Paris P et al. Novel poplar genotypes for short rotation plantations in Mediterranean environment: productivity and biomass quality for biorefinery. 10th SISEF National Conference. “Sustaining the planet, forests for life".	15-18 Sept. 2015	Florence, Italy	Academia	250	Italy
153	Oral presentation to a scientific event	CNR	Camilli et al. L’approccio partecipativo alla ricerca per lo sviluppo di pratiche agroforestali innovative: quattro casi studio del progetto AGFORWARD” [The participatory approach to research for the development of innovative agroforestry practices: the Italian case studies in the AGFORWARD project.] 10th SISEF National Conference.	15-18 Sept. 2015	Florence, Italy	Academia	250	Italy

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
251	Oral presentation to a general audience	EVD	Herzog F., Jaeger M. (2015) L'agroforesterie en Suisse – perspectives, promesses et questions. Presentation to the Association : Vision d'agriculture Suisse	19 Sept 2015	Arnex, CH	I, SC	20	Switzerland
154	Oral presentation to a scientific event	CNR	Camilli et al., Stakeholders' perceptions of environmental and socio-economic benefits and constraints associated to agroforestry systems. International Workshop "Mediterranean agro-silvopastoral systems: Searching for trade-offs among provisioning, regulating and cultural ecosystem services"	15 Dec. 2015	Sassari, Italy	SC, PM	75	Italy
155	Oral presentation to a scientific event	CNR	Franca A Grazing management on pasture productivity, biodiversity and fire prevention in Sardinian silvo-pastoral systems International Workshop "Mediterranean agro-silvopastoral systems: Searching for trade-offs among provisioning, regulating and cultural ecosystem services"	15 Dec. 2015	Sassari, Italy	SC, PM	75	Italy
156	Oral presentation to a wider public	CRAN	Two hour meeting focused on agroforestry with the UK National Farmers Union	17 Dec 2015	Warwick-shire	PM	10	UK
157	Oral presentation to a scientific event	CNR	Franca A, Porqueddu C, Re GA, Sanna F Gestione della copertura erbacea in sistemi silvo-pastorali. Workshop Multifunzionalità e Gestione sostenibile delle foreste mediterranee	21 Jan. 2016	Cagliari, Italy	SC, PM	100	Italy
158	Oral presentation at Scientific event	CRAN	Burgess, P.J. (2016). Overview of Agroforestry and its Benefits. Presentation at the Oxford Real Farming Conference	7 Jan 2016	Oxford, UK	SC, CivS, I	100	UK
159	Oral presentation at Scientific event	CRAN	Burgess, P.J. (2016). Agroforestry: Complexity underpinning multiple benefits from the farm to the landscape. Presentation at the "Designing the Path: a Strategic Approach to EU Agricultural Research and Innovation" conference.	28 Jan 2016	European Commission, Brussels	SC, I, Pol, CivS	250	EU
160	Oral presentation to an education event	USC	Rois Díaz, M. Integrando práctica y ciencia en los sistemas agroforestales en Europa (Integrating	18 Mar 2016	Ponferrada, Spain	SC	50	Spain

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			practice and science in agroforestry systems in Europe)					
161	Oral presentation to a scientific event	UCPH	Plieninger, T. Approaches for mapping the distribution, changes, and socio-cultural values of European wood-pasture landscapes	24 Mar 2016	VU University Amsterdam	SC	40	Europe
162	Oral presentation to a scientific event	AGROOF	Conference organised by ADEME on Agroforestry and soil. Intervention on the topic of agroforestry, soil and carbon in the territory projects	12 May 2016	national	SC	200	France
163	Oral presentation to a scientific event	AGROOF	Conference organised by IRTA in Catalogne (Spain) and the Spanish association. Development and perspective of Agroforestry in France	21 May 2016	national	SC	50	Spain
164	Oral presentation to a scientific event	AFAF	Lawson GJ, Balaguer F, Palma JHN, Papanastasis V, Options for agroforestry in the CAP 2014-2020.. 3rd European Agroforestry Conference.	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
165	Oral presentation to a scientific event	BTU	Mirck J, Kanzler M, Böhm C, Freese D. 2016. Sugar beet yields and soil moisture measurements in an alley cropping system. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	Europe
166	Oral presentation to a scientific event	BTU	Kanzler M, Bohm C, Mirck J. Microclimate effects of short rotation tree-strips in Germany.. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	Europe
167	Oral presentation to a scientific event	CNR	Camilli F., Pisanelli A., Seddaiu G., Franca A., Bondesan V., Rosati A., Moreno GM., Pantera A., Hermansen J.E., Burgess P.J. Benefits and constraints associated to agroforestry systems: the case studies implemented in Italy within the AGFORWARD project. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
168	Oral presentation to a scientific event	CNR	Paris P., Tosi L., Leonardi L., Ciolfi M., Della Valle C., Sangiovanni M., Lauteri M. Interspecific interactions on the light, water and nitrogen availability in a young poplar silvoarable system. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
169	Oral presentation to a scientific event	CNR	Facciotto G, Paris P, Bergante S. Growth and yield results of timber trees mixed with poplars SRC: 9 years of an experimental site in the Po Valley. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
170	Oral presentation to a scientific event	CRAN	Burgess PJ, Den Herder M, Dupraz C, Garnett K, Graves AR, Hermansen J, Liagre F, Mirck J, Moreno G, Mosquera-Losada MR, Palma JHN, Pantera A, Plieninger T (2016). AGFORWARD: Achievements during the first two years. Presentation at Third European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
171	Oral presentation at Scientific event	CRAN	Burgess PJ, Garcia de Jalon S, Graves A (2016). Complexity and agroforestry : ways to embrace the challenge. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
172	Oral presentation at Scientific event	CRAN	Garcia de Jalon S, Graves A, Kaske KJ, Palma J, Crous-Duran J, Burgess PJ (2016). Assessing the environmental externalities of arable, forestry, and silvoarable systems: new developments in Farm-SAFE. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
173	Oral presentation to a scientific event	CREA	Brunori A, Dini F., Proietti P., Nasini L., Aguilera E., Infante-Amate J., González de Molina M., Rosati A. 2016. From ancient olive agroforestry systems to modern conventional and organic olive monocultures: historical evolution of greenhouse gas emissions. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
174	Oral presentation to a scientific event	CREA	Mantovani D., Benincasa P., Rosati A. 2016. Olive (*Olea europaea* L.) and wild asparagus (*Asparagus acutifolius* L.) agroforestry system: asparagus performance and its best positioning in the olive orchard. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France.	SC, I, PM	70	International
175	Oral presentation to	CREA	Rosati A, Boggia A, Castellini C, Paolotti L, Rocchi	23-25 May	Montpellier,	SC, I, PM	70	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
	a scientific event		L. When chickens graze in olive orchards, the environmental impact of both chickens and rearing and olive growing decreases. 3rd European Agroforestry Conference	2016	France			
176	Oral presentation to a scientific event	EFI	den Herder M, Moreno G, Mosquera-Losada R, Palma J, Sidiropoulou A, Santiago Freijanes JJ, Crous-Duran J, Paulo JA, Tomé M, Pantera A, Papanastasis V, Konstantinos Mantzanas, Przemko Pachana, Plieninger T, Burgess PJ. Current extent of agroforestry in Europe. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, FR	SC, I, PM	70	International
177	Oral presentation to a scientific event	EVD	Jager M, Herzog F. (2016) Participatory agroforestry development in Switzerland. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
178	Oral presentation to a scientific event	EVD	Sereke F, Graves A, Herzog F (2016) Drivers of Swiss agroforestry: It's not all about money. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
179	Oral presentation to a scientific event	INRA	Desclaux D, Huang H-Y, Bernazeau B, Laven P. Agroforestry: new challenge for field crop breeding?. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
180	Oral presentation to a scientific event	INRA	Dupraz C, Lecomte I, Molto Q, Blitz-Frayret C, Gosme M. Agroforestry at all latitudes? Unexpected results about best designs to allow more light to the crops at various latitudes. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
181	Oral presentation to a scientific event	INRA	Gosme M, Dufour L, Inurreta Aguirre HD, Dupraz C. Microclimatic effect of agroforestry on diurnal temperature cycle. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
182	Oral presentation to a scientific event	INRA	Inurreta Aguiree HD, Dufour L, Dupraz C, Lauri PE, Gosme M. Effect of agroforestry on phenology and components of yield of different varieties of durum wheat.. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
183	Oral presentation to a scientific event	INRA	Novak S, Liagre F, Emile JC. Integrating agroforestry into an innovative mixed crop-dairy system. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
184	Oral presentation to a scientific event	INRA	Meziere D, Boinot S, de Waal L, Cadet E, Fried G. Arable weeds in alley cropping agroforestry systems – results of a first year survey. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
185	Oral presentation to a scientific event	ISA	Palma JHN, Graves AR, Crous-Duran J, Paulo JA, Oliveira TS, Garcia de Jalon S, Kay S, Burgess PJ. Keeping a parameter-sparse concept in agroforestry modelling while integrating new processes and dynamics: new developments in Yield-SAFE. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France.	SC, I, PM	70	International
186	Oral presentation to a scientific event	ISA	Palma JHN, Oliveira TS, Crous-Duran, Paulo JA. Using Yield-SAFE model to assess hypothetical eucalyptus silvopastoral systems in Portugal. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
187	Oral presentation to a scientific event	ISA	Crous Duran J, Moreno G, Oliveira TS, Paulo JA, Palma JHN. Modelling holm oak acorn production in South-Western Iberia. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
188	Oral presentation to a scientific event	ISA	Lawson GJ, Brunori A, Palma JHN, Balaguer F. Sustainable management criteria for agroforestry in the European Union. 3rd European Agroforestry Conference.	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
189	Oral presentation to a scientific event	LBI	Luske B, Van Evlow K, Vonk M. Bottlenecks and solutions for introducing agroforestry: a case study for the Netherlands. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
190	Oral presentation to a scientific event	NYME KKK	Vityi A, Kovács K, Dufla F, Bácsmegi L, Nagy I. Improve the efficiency of afforestation by the use of agroforestry practices. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
191	Oral presentation to a scientific event	TEI	Pantera A, Papadopoulos A, Kitsikopoulos D, Mantzanas K, Papanastasis V, Fotiadis G, Burgess P Olive groves intercropped in Molos, Central Greece. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
192	Oral presentation to a scientific event	TEI	Mantzanas K, Pantera A, Delapre L, Koutsoulis D, Papadopoulos A, Fotiadis G, Sidiropoulou A, Papanastasis VP. Olive trees intercropped with cereals and legumes in Kassandra peninsula, Northern Greece, 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
193	Oral presentation to a scientific event	UCPH	Fagerholm N, Oteros-Rozas E, Raymond CM, Torralba M, Moreno, G, Plieninger, T. Importance of ecosystem services from agroforestry for local people. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
194	Oral presentation to a scientific event	UEX	Arenas-Corraliza G, Mantino A, López-Díaz ML, Moreno G. Cropping Among Trees to Cope with Climate Change. Insights from Cereal. Yield Cultivated in Walnut Plantations of Central Spain. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
195	Oral presentation to a scientific event	UEX	López-Díaz ML, Bertomeu M, , Benítez R, Arenas-Corralizas G, Moreno G. Carbon sequestration in intensive hardwood plantations: Influence of management. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
196	Oral presentation to a scientific event	UEX	Moreno G, Aviron S, Berg S, Burgess PJ, Caceres Y, Crous-Duran J, Faias SP, Firmino PN, Fotiadis G, Franca A, Garcia de Jalon, S., Hartel T, Lind T, López Bernal A, Mantzanas K, Mirck J, Palma J, Pantera A, Paulo JA, Papadopoulos A, Papanastasis V, Papaspyropoulos K, Popa R, Porqueddu C., Rákosy L, Re GA, Sanna F, Thenail C, Tsonkova P, Valinger E, Varga A, Viaud V, Vityi A. Agroforestry systems of high natural and cultural value in Europe: structure, management,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			goods and services. 3rd European Agroforestry Conference					
197	Oral presentation to a scientific event	UEX	Moreno G, Berg S, Burgess PJ, Camilli F, Crous-Duran J, Franca A, Hao H, Hartel T, Lind T, Mirck J, Palma J, Pantera A, Paula JA, Pisanelli A, Rolo V, Seddaiu G, Thenail C, Tsonkova P, Upson M, Valinger E, Varga A, Viaud V, Vityi A. Agroforestry systems of high natural and cultural value in Europe: constraints, challenges and proposal for the future. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
198	Oral presentation to a scientific event	USC	Ferreiro-Dominguez N, Rigueiro-Rodriguez A, Mosquera-Losada MR Productivity of silvoarable systems established with *Prunus avium* L. in Galicia (NW Spain). 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
199	Oral presentation to a scientific event	USC	Mosquera-Losada MR, Santiago-Freijanes JJ, Lawson G, Balaguer F, Vaets N, Burgess P, Rigueiro-Rodriguez A. Agroforestry as tool to mitigate and adapt to climate under LULUCF accounting.3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
200	Oral presentation to a scientific event	USC	Mosquera-Losada MR, Santiago-Freijanes JJ, Rois M, Moreno G, Pisanelli A, Lamersdorf N, den Herder M, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Rigueiro-Rodriguez A.CAP and agroforestry practices in Europe. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
201	Oral presentation to a scientific event	USC	Mosquera-Losada MR, Santiago-Freijanes JJ, Pisanelli A, Lamersdorf N, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Ferreiro-Dominguez N, Rigueiro-Rodriguez A. Agroforestry in the CAP: Eligibility. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
202	Oral presentation to	USC	Mosquera-Losada MR, Santiago-Freijanes JJ,	23-25 May	Montpellier,	SC, I, PM	70	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
	a scientific event		Pisanelli A, Moreno G, den Herder M, Lamersdorf N, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Ferreiro-Dominguez N, Rigueiro-Rodriguez A. Agroforestry in the CAP: Cross-compliance or conditionality. 3rd European Agroforestry Conference,	2016	France			
203	Oral presentation to a scientific event	USC	Santiago-Freijanes JJ, Mosquera-Losada MR, Pisanelli A, Lamersdorf N, Burgess PJ, Fernandez-Lorenzo JL, Gonzalez-Hernandez P, Ferreiro-Dominguez, Rigueiro-Rodriguez A. Agroforestry in the rural development CAP: Pillar II. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	70	International
252	Oral presentation to a scientific event	INRA	Cabon V (2016). Presentation of "Evaluation des haies nouvelles plantées par l'association Terres & Bocage" at General Assembly of "Terres & Bocage" s	16 June 2016	Trédaniel, Brittany, France	I	40	France
204	Oral presentation to a scientific event	UEX	López Díaz ML, Bertomeu M, Urban I, Homar CA, Moreno G. Title: Técnicas alternativas de manejo de plantaciones de producción de madera de calidad en régimen intensivo Event: V Reunión del Grupo de Trabajo sobre Sistemas Agroforestales de la Sociedad Española de Ciencias Forestales (SECF)	21-22 Jun 2016	Solsona, Spain	SC, I	50	Spain
205	Oral presentation to a scientific event	UEX	Gerardo Moreno, Manuel Bertomeu, Yonathan Cáceres, Ana Hernández, Enrique Juárez, Lourdes López-Díaz, Fernando Pulido. Concerns and Innovations for dehesas. V Reunión del Grupo de Trabajo sobre Sistemas Agroforestales de la Sociedad Española de Ciencias Forestales (SECF)	21-22 Jun 2016	Solsona, Spain	SC, I	50	Spain
206	Oral presentation to a scientific event	UEX	Gerardo Moreno[1], Manuel Bertomeu, Enrique Juárez Title: Response to thinning of a hybrid walnut plantation for timber in Madrigal de la Vera, Cáceres, Spain. Event: V Reunión del Grupo de Trabajo sobre Sistemas Agroforestales de la	21-22 Jun 2016	Solsona, Spain	SC, I	50	Spain

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			Sociedad Española de Ciencias Forestales (SECF)					
207	Oral presentation to a scientific event	UEX	Manuel Bertomeu[1], Enrique Juárez, Gerardo Moreno Title: Response to pollarding of cavitated, plantation-grown wild cherry timber trees (*Prunus avium* L.) in Madrigal de la Vera, Cáceres, Spain. Event: V Reunión del Grupo de Trabajo sobre Sistemas Agroforestales de la Sociedad Española de Ciencias Forestales (SECF)	21-22 Jun 2016	Solsona, Spain	SC, I	50	Spain
208	Oral presentation at Scientific event	CRAN	Burgess PJ, Smith J, McAdam J, Garcia de Jalon S, Aviron S, Corroyer N, Wartelle R, den Herder M (2016). The AGFORWARD project and stakeholder groups across North-West Europe. Presentation at Farm Woodland Forum Annual Meeting	22 Jun 2016	Ballyhaise Agricultural College, Co. Cavan, Ireland.	SC, I	25	Ireland, UK
209	Oral presentation at Scientific event	CRAN	Garcia de Jalon S, Graves A, Kaske KJ, Palma J, Crous-Duran J, Burgess PJ (2016). Assessing the environmental externalities of silvoarable systems in Farm-SAFE. Presentation at Farm Woodland Forum Annual Meeting	22 Jun 2016	Ballyhaise Agricultural College, Co. Cavan, Ireland.	SC, I	25	Ireland, UK
210	Oral presentation to a scientific event	CNR	Sanna, Franca A, et al. The potential role of seedbanks in maintaining grassland vegetation in a Mediterranean oak woodland. 19th Meeting of the FAO-CIHEAM Mountain Pastures sub-network	14-16 June 2016	Saragozza, Spain	SC, PM	150	International
Poster								
211	Poster	IBAF	Paris et al., "Sistemi agroforestali per un nuovo uso del suolo ad alta valenza produttiva ed ecologica" (in Italian) [Agroforestry as a new land use system with high Productive and Environmental Value], ISPRA National Conference "Let's Gain Ground! Policies, Actions and Measures for Sustainable Land Use" (http://www.isprambiente.gov.it/en/publications/proceedings/)	6 May 2015	Milan, Italy	SC,PM	150	Italy
212	Poster	BTU	Mirck, J. Tsonkova, P., Freese, D. (2015). Agroforestry Practice Identification and	1-4 Jun 2015	Ames, Iowa, USA	SC, PM, I	120	

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			Development through Stakeholder Engagement					
213	Poster	AFBI	McAdam, J., Olave, R., Ward, F. (2015) Grazing in Silvopasture and Fruit Orchards Historical Experience and Future Potential. Poster presentation Agricultural Historical Society	6 June 2015	Armagh, Northern Ireland	SC, PM	37	Ireland
214	Poster at scientific event	CRAN	Burgess, P.J., Sanchez Martinez, P.J., Williams, A.G. (2015). At what scale should livestock-forest systems be considered? Poster at World Congress of Integrated Crop-Livestock-Forest Systems.	17 Jul 2015	Brasilia, Brazil	SC, I, Pol	200	International
215	Poster	EVD	Herzog F., Junquera V., Szerencsits E., Jaeger M. (2015) Vom traditionellen Hochstamm-Feldobstgarten zum modernen Agroforstsystem Poster presented at the 23rd annual assembly of the Swiss Society of Agronomy	20 Mar 2015	Zollikofen, Switzerland		50	Switzerland
216	Poster presentation	INRA-Ferlus	Agroforestry for livestock to restore biodiversity in Poitou-Charentes territories	1 Oct 2015	Journée de la haie. Melle, France	Ed	150	France
217	Poster presentation to a scientific event	INRA-Ferlus	Novak S. Grasslands adapted to climate change for a dairy system saving water and energy: the OasYs projet. Seminar on the methods and results of the INRA project	Oct 2015	"Climagie", Poitiers, France	SC	50	France
218	Poster presentation to a scientific event	BTU	Tsonkova P, Mirck J, Böhm C, Fütz B, Freese D. 2016. The lack of a clear definition of Agroforestry as a barrier to the widespread acceptance of the system in Germany. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	Europe
219	Poster presentation to a scientific event	EVD	Kay S, Herzog F, Aviron S, Crous J, den Herder M, Ferreiro-Dominguez N, García de Jalon S, Graves A, Moreno G, Palma J, Plieninger T, Szerencsits E, Torralba Viorreta M, Viaud V. Ecosystem services in agroforestry systems in Europe with an International emphasis on biodiversity. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	International

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
220	Poster presentation to a scientific event	INRA-Ferlus	Emile JC, Delagarde R, Barre P, Novak S. Nutritive value and degradability of leaves from temperate woody resources for feeding ruminants in summer. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	SC, I, PM	250	Europe
221	Poster presentation to a scientific event	NYME KKK	Varga A., Molnár Á., Harsányi D, Tóth T., Őze P., Sallainé Kapocsi J., Molnár Zs., Biró M. Floodplain forest grazing management: past, present and future. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	International
222	Poster presentation to a scientific event	NYME KKK	Vityi A, Frank N. Shelterbelt as a best practice of improving agricultural production. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	International
223	Poster presentation to a scientific event	UCPH	Fagerholm, N, Torralba, M., Burgess, P.J., Plieninger, T. A systematic map of ecosystem services assessments around European agroforestry. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	Europe
224	Poster presentation to a scientific event	ORC	Smith J, Fradgley N and Wolfe MSW. Developing agroforestry-adapted cereals using an evolutionary plant breeding approach. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	International
225	Poster presentation to a scientific event	VENETO	Gumiero B, Boz B, Colombani N, Mastrocicco M, Della Venezia F, Agostinetto L, Correale F, Mezzalira G. Phytodepuration processes in two short rotation forestry systems within the Venice lagoon watershed. 3rd European Agroforestry Conference	23-25 May 2016	Montpellier, France	SC, I, PM	250	International
226	Poster presentation to a scientific event	VENETO	Dalla Valle C., Fiorentin R., Rizzi A., Mezzalira G. Agroforestry demo-projects in Veneto Agricoltura's pilot farms and centres. 3rd European Agroforestry Conference,	23-25 May 2016	Montpellier, France	researchers, farmers, policy makers	250	International
News articles								
227	Article	UCPH	Torralba Viorreta, M. Hedgerow planting in Denmark	24 Feb 2015	EURAF Newsletter	Europe		Europe
228	Tailor-made	LBI	Agroforestry op akkerbouwbedrijven in Drenthe.	5 Mar 2015	Assen, NL	PM	5	Netherlands

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
	information leaflet		Leaflet for Policy makers in the province of Drenthe					
229	Interview	INRA-Ferlus	Interview on agroforestry in the frame of the projet OasYs of INRA Lusignan, on the web site of "La France Agricole".	17 Mar 2015	France	I, CivS, PM, M	100 000	France
230	Web article	INRA-Ferlus	L'agroforesterie expérimentée à Lusignan	26 Mar 2015	France	I, CivS, PM, M	10 000	France
231	Newspaper article	INRA-Ferlus	Le pâturage prend de la hauteur. France Agricole, p. 31.	24 Apr 2015	France	I, CivS, PM, M	100 000	France
232	Newspaper article	INRA-Ferlus	Le réchauffement fait de l'ombre à l'élevage. La Recherche, 501-502, p. 86-89.	July-August 2015	France	Sc, I, CivS, PM, M	100 000	France
233	Web site	AGROOF	AGFORWARD news item on Agroof website http://www.agroof.net/agroof_dev/agroof_agforward.html	01/2015	France	SC, I, Ed		Europe
234	Newsletter	LBI	1st Newsletter Agroforestry NL http://www.louisbolk.org/downloads/3073.pdf	3 Apr 2015	NL	I, CivS, Sc	200	NL
235	Newsletter	IBAF	Pisanelli A., Santiago J. , Rosati A., Mosquera R., 2015. Agroforestry policies in the EU in the RPDs 2007-2013. EURAF Newsletter Nº11, May 2015. https://euraf.isa.utl.pt/sites/default/files/pub/docs/euraf_newsletter_may_2015.pdf	May 2015		SC, PM, I		Europe
236	Newsletter	LBI	2nd Newsletter Agroforestry NL http://www.louisbolk.org/downloads/3074.pdf	10 Jun 2015	NL	I, CivS, Sc	225	NL
237	Newsletter	EVD	Herzog F., Junquera V., Szerencsits E., Jaeger M. (2015) Vom traditionellen Hochstamm-Feldobstgarten zum modernen Agroforstsystem. In: Bulletin SGWP/SSA n° 27, p. 15.					
238	Article in farmers' magazine	LBI	Bestman, M., Bloksma, J., Manintveld, A. (2015). Kip in 't fruit, boom in de uitloop. Samenwerking fruittelers en pluimveebedrijven biedt kansen. Ekoland juli/aug: 24-26.	15 Jun 2015	NL	Organic sector	2200	NL
239	Newspaper article	AFBI	Moore, O. (2015) Mutton and hurleys to save the world. Online at: http://olivermoore.blogspot.it/2015/08/agrofore	30 Jul 2015	Ireland	SC, PM, I, CivS		UK and Ireland

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			stry-saving-world-with-mutton.html and in press Irish Examiner, 30 July 2015 http://olivermoore.blogspot.it/2015/08/agroforestry-saving-world-with-mutton.html					
240	Research report	LBI	Bestman, M., Verwer, C., Stoffelsma, M. (2015). Geiten in de Leemkuilen: effect op vegetatie en diergezondheid. LBI report 2015-038 LbD.	15 Aug 2015	NL	Organic goat farmers	unlimited	NL
241	Newspaper article	AFBI	Lunny, R (2015). Agroforestry's Perfect for Donegal . Finn Valley Voice (Vol. 7, Issue 11)	Sep 2015	Donegal, Ireland	CivS		Ireland North and South
242	Website article	AFBI	Moore, O. (2015) Agroforestry: saving the world with meat and sport. http://www.farmingfutures.org.uk/blog/agroforestry-saving-world-meat-and-sport	28 Sept 2015	Ireland	I, SC		Europe
243	ORC Bulletin 119 article	ORC	'Who says vegetables don't fit in agroforestry?' Jo Smith	Autumn/Winter 2015	UK	I, SC, PM, CivS	~200	UK, Europe
244	EURAF Newsletter 17 article	ORC	Jo Smith: 'Farming biodiversity: a new organic agroforestry system'	May 2016	Europe	SC, CivS	200+	Europe
Field visits								
245	Flyers	LBI	Leaflet 'Boomteelt op veehouderijbedrijven'; Thematic 'exhibition' on agroforestry for livestock farmers on organic fair	21-22 Jan 2015	Zwolle, NL	Farmers	12,000	NL
246	Open day	Veneto	Open day for young farmers : Agroforestry and Wild Botany Biodiversity in farmland. Opportunity from the next Rural Develop Programme (2014-2020)	12 March 2015	Legnaro, Padova Italy	Young farmers	200	Italy
247	Field visit at a scientific event	ORC	Smith, J. (2015). Agroforestry at the Organic Research Centre. Tour of Elm Farm silvopastoral site at Farm Woodland Forum Annual General Meeting. http://www.organicresearchcentre.com/manage/authincludes/article_uploads/ORC%20AGROFORESTRY%202015.pdf	18 May 2015	Newbury, UK	SC, PM, I, Ed	50	UK, Ireland
248	Field visit	AFBI	McAdam, J. (2015) Agroforestry experimental research facility farm visit to Agricultural	5 Jun 2015	Armagh	SC, PM	37	Ireland

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
			Historical Society of Ireland					
249	Field visit	AFBI	McAdam, J. (2015) Agroforestry experimental research facility farm visit for the Agricultural and Rural Development (ARD) Committee	3 Jul 2015	Armagh	PM	4	Northern Ireland
253	Visit of agroforestry plots	INRA-Ferlus	Visit by several groups of students of the agroforestry plots of INRA Lusignan.	Several days in 2015 and 2016	Lusignan, France	Ed	80	France
254	Visit of agroforestry plots	INRA-Ferlus	Visit by several groups of farmers of the agroforestry plots of INRA Lusignan.	Several days in 2015	Lusignan, France	I	30	France
255	Visit of agroforestry plots	INRA-Ferlus	Visit of the agroforestry plots of INRA Lusignan by the participants of the french agroforestry projet ”Arbele”.	7 Jul 2015	Lusignan, France	Sc, Ed, I	12	France
257	Visit of agroforestry plots	AFBI	McAdam, J. (2015) Agroforestry experimental research facility farm visit for Armagh City Council	10 Jul 2015	Armagh	PM	8	Northern Ireland
256	Visits of experimental agroforestry plots	INRA	Visit by several groups of farmers, teachers, students of our experimental sites in Restinclières	Apr-Jun 2015	Montpellier	I, Ed	150	France
258	Stakeholder meeting presentation	NYME KKK	Varga A. Past, present and future of the wood pastures in the Bakony-Balaton region and AGFORWARD project. Event: Herder meeting of the Balaton-Bakony region	14 Nov 2015	Nemesvámos	I, CivS		
259	Workshop	CRAN	Grazed orchards in England and Wales wtakeholder meeting	16 Dec 2015	Hereford-shire, UK	I	20	UK
260	Workshop	INRA	Valérie Viaud, Claudine Thenail & Valentin Cabon participated in a debate organized by "Terres & Bocage" Association, attended by farmers and extension workers	29 April 2016	Moncontour Brittany, France	I,	30	France
261	Stakeholder meeting presentation	NYME KKK	Vityi A. (2016).Participatory research and development in AGFORWARD project Event: Stakeholder meeting and establishment of the Hungarian Agroforestry Civil Association	6 May 2016	Fajsz	I, SC	20	Hungary
262	Visit of agroforestry plots	INRA-Ferlus	Visit by the leaders of the french agroforestry projet ”Bois UE” of the agroforestry fields, boundary hedgerows and wood of INRA Lusignan.	9 May 2016	Lusignan, France	Sc	3	France
263	Stakeholder meeting	NYME	Varga A. (2016) Silvopastoral systems. Herder and	24 Jun.2016	Szenna	I, CivS, SC	32	Hungary

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
	presentation	KKK	stakeholder meeting of South Hungary (Somogy, Baranya county)					
264	Stakeholder workshop	ORC	'Agroforestry for Growers' with Organic vegetable growers	30 Nov 2015	Whitchurch on Thames, UK	I	40	UK
265	Workshop presentation	INRA-Ferlus	Towards farms with positive energy: the OasYs system-experiment	3 Dec 2015	Lycée agricole Melle, France	Ed, I	20	France
266	Stand exhibition	INRA-Ferlus	Agriculture and innovation: OasYs, an agroecological dairy system. Paris International Agricultural Show	27 Feb – 6 Mar 2016	Paris, France	I, CivS, PM, M	250	France
Policy development								
267	Policy Development	AFBI	McAdam, J. (2015) Agro-Forestry input on Pg 4 within the CAP Clarification document https://www.dardni.gov.uk/articles/2014-2020-rural-development-programme. Online: https://www.dardni.gov.uk/articles/2014-2020-rural-development-programme	2015		PM		Northern Ireland
268	Policy Development	AFBI	McAdam, J. (2015) The Northern Ireland, Agricultural and Rural Development (ARD) Agricultural and Rural Development (ARD) Committee visit to Agroforestry experimental research facility Loughgall	03 Jul. 2015	Loughgall, Northern Ireland	PM	6	Northern Ireland
269	Policy Development	AFBI	McAdam, J. (2015) Representatives of the Armagh City Council visit the Agroforestry experimental research facility at Loughgall	10 Jul 2015	Loughgall, Northern Ireland	PM	8	Northern Ireland
270	Policy Development	AFBI	McAdam, J. (2015) Input to the development of the Rural Development Plan 2014-2020 M08 - Agroforestry measures Option 17 on Pg 237 of draft RDP. Online: https://www.dardni.gov.uk/search?query=cap+reform+policy+clarification&edit-submit-	10. Aug. 2015		SC, PM		Northern Ireland
Technology transfer								

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
271	Technology Transfer	AFBI	McAdam, J.H. (2015). Hill Farming Committee visit AFBI Loughgall.	2015	Loughgall, Northern Ireland			Northern Ireland
272	Technology Transfer	AFBI	Ward, F.R. (2015). Greenmount Student visit to Top Fruit and Agroforestry Research Programmes.	2015	Loughgall, Northern Ireland	Ed	18	Northern Ireland
273	Technology Transfer	AFBI	McAdam, J. (2015) The Agricultural History Society of Ireland Conference Delegates Farm Trip to the Agroforestry experimental research facility at Loughgall	1 Jun. 2015	Loughgall, Northern Ireland	SC, PM, I	37	Ireland North and South
274	Technology Transfer	AFBI	Ward, F. (2015) CAFRE staff and Agricultural Students visit the Agroforestry experimental research facility at Loughgall	17 Sept 2015	Loughgall, Northern Ireland	Ed	45	Northern Ireland
275	Technology Transfer	AFBI	Ward, F. (2016) CAFRE staff and Agriculture Degree students visit Loughgall orchards and AgForward Orchard Grazing trial	28 Apr. 2016	Loughgall, Northern Ireland	Ed	14	Northern Ireland
276	Technology Transfer	AFBI	Aurélie, A. (2016) Esmor Wyn Hughes From Glynllifon College in Wales staff and students visit the Agroforestry programme at Loughgall	23 May 2016	Loughgall, Northern Ireland	Ed	49	Welsh
277	Technology Transfer	AFBI	McAdam, J.H. (2016). Queens University Senior Staff visit to the Agroforestry Research Programme at AFBI Loughgall	8 Jun 2016	Loughgall, Northern Ireland	Ed	10	Northern Ireland
Flyers								
278	Flyers	ISA	Feria Internacional da Cortica 2015, Coruche http://www.ficor.com.pt/custompages/showpage.aspx?pageid=e67358eb-fc46-4aef-92af-126568598062&m=b1060	28 May 2015	Coruche Portugal	CivS	300	Portugal
279	Flyers	ISA	Feria Internacional da Cortica 2016 (Coruche) http://www.ficor.com.pt/CustomPages/ShowPage.aspx?pageid=2ded6b91-0fa5-4d77-b20a-d8cc0564e84f	26-29 May 2016	Coruche Portugal	CivS	300	Portugal
280	Flyers	ISA	53th National Agriculture fair (Santarém) http://feiranacionalagricultura.pt	4-12 June 2016	Santarém, Portugal	CivS	1000	
Education								

	Type of activity	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
281	Course	INRA-Ferlus	Innovating on cattle production	29/09/2015,	Lusignan, France	Ed	20	France
282	Course	INRA-Ferlus	Innovating on cattle production	14/12/2015,	Lusignan, France	Ed	20	France
283	Course	INRA-Ferlus	Innovating on cattle production	8/03/2016	Lusignan, France	Ed	20	France

9.4 Regular communication

The next activity (Task 9.4) was to provide regular communication to key stakeholders through the use of electronic newsletter, newspaper articles and briefing. Since the start of the project, eight electronic newsletters (Table 9.9) have been sent to 500 people with an interest in agroforestry. The newsletters have been issued through the secure UK-based Jiscmail system (Figure 9.5). The newsletters have active links which directs readers to the content of the AGFORWARD website. The creation and dissemination of the newsletters has been led by CRAN working with EURAF and AGROOF. Some partners have a dedicated AGFORWARD page on their institutional websites (AGROOF, CRAN, ORC, and NYME). The project also has an active Facebook page (Box 9.1).

Table 9.9. Newsletters produced during the project and some key news items

June 2014	Introducing AGFORWARD, agroforestry and the European Agroforestry Conference https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;c62ff057.1407p
Nov 2014	Stakeholder reports and introducing Facebook https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;1420af24.1411p
Jan 2015	Stakeholder reports and agroforestry in Africa https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;d4856219.1501p
May 2015	Mapping our research in Europe https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;57917d79.1505p
Aug 2015	First progress reports and research protocols https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;af46e9d6.1508p
Nov 2015	EXPO 2015 and synthesis of research protocols https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;e7f71367.1511p
Feb 2016	Report on extent of agroforestry and the National Plan for Agroforestry in France https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;e2d82b9f.1602p
June 2016	Third European Agroforestry Conference https://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=AGROFORESTRY-NEWS;f5880a27.1606p

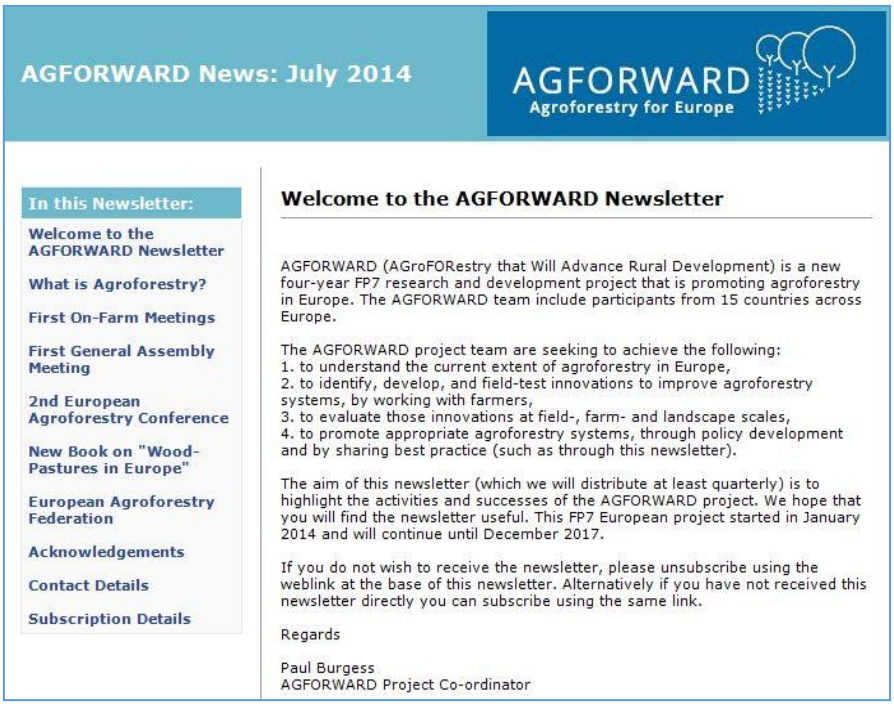
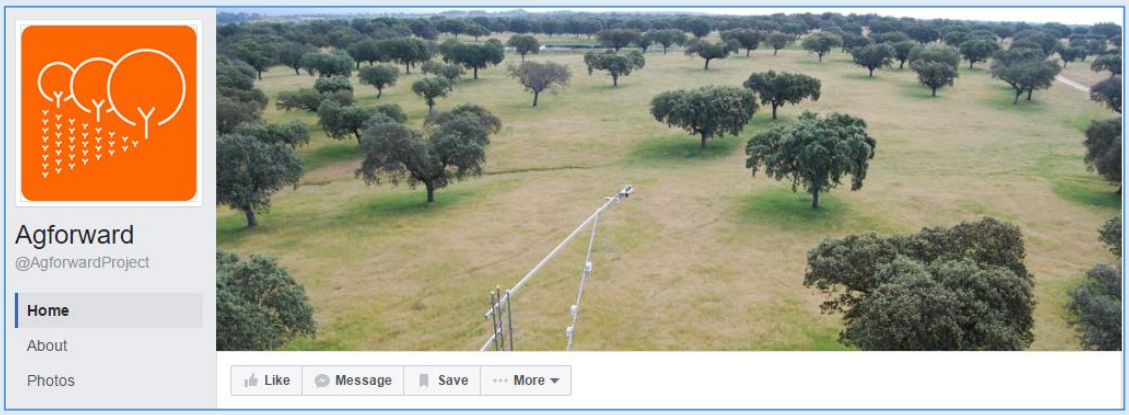


Figure 9.5. Screen shot of part of an AGFORWARD newsletter

Box 9.1. AGFORWARD has a Facebook page with 850 followers

A useful activity and output of the AGFORWARD project, which was specifically mentioned in the original description of work, has been the establishment and maintenance of the AGFORWARD Facebook page: https://www.facebook.com/AgforwardProject. As of 28 August 2016, the page has 854 followers. Whereas the newsletter is released quarterly, items of news can be posted to the AGFORWARD Facebook pages as it happens, and material that is of interest can be shared. Between January 2015 and June 2016 there were 87 new items posted on the Facebook page.



9.5 Education tools

The fifth task of the dissemination work-package (Task 9.5) is to assess the specific needs for education tools and to produce appropriate material. AGROOF has been working with a group of students and four teachers at the Ecole des Mines d'Alès / Celsa Paris Sorbonne. A first proposal for the toolkit was produced and a prototype was discussed with partners in Chania in June 2015. A first draft of the webpage has been achieved in April 2016 and discussed with the partner during the Montpellier workshop in May 2016. In June 2016, a training tool-kit (Deliverable 9.29) on a new web-page domain was created (http://train.agforward.eu/language/en/agforall/) (Figure 9.6). A short report (Table 9.10) has been uploaded to the EC research portal.

Table 9.10. Reference for a report describing Deliverable 9.29.

Liagre F, Le Gallic H, Pantera A, Smith J, Mirck J, Moreno G, Palma J, Vityi A, Rosati A, Ori D, Paul Watté J, Burgess PJ (2016). Deliverable 9.29 (9.5): Training toolkit for farmers, technicians and students. 30 June 2016. 5 pp.

Figure 9.6. Training outputs will continue to be added to a section of the website (http://train.agforward.eu/language/en/agforall/) during the project.

9.6 Regional conferences and workshops

The sixth activity (Task 9.6) is to co-ordinate regional conferences and workshops. The main conference during the past 18 months has been the Third Agroforestry Conference, which was coordinated by the European Agroforestry Federation, hosted by INRA, and supported by AGFORWARD (Box 9.2). The Book of Abstracts by Gosme et al (2016) extends to 466 pages and is available on the EURAF website (Table 9.11).

Table 9.11. Reference for a Book of Abstracts for the Third European Agroforestry Conference

Gosme, M, Paulo JA, Borek R, Burgess P, Dupraz C, Dominguez NF, Freese D, González-Hernández P, Hartel T, Lamersdorf N, Lawson G, Lojka B, Mézière D, Moreno G, Mosquera-Losada R, Palma, J, Pantera A, Paris P, Pisanelli A, Plieninger T, Reubens B, Rois M, Rosati A, Smith J, Vityi A. (Eds) (2016), 3rd European Agroforestry Conference Book of Abstracts. Montpellier, France 23-25 May 2016. ISBN: 978-2-87614-717-1, EAN: 9782876147171. http://www.agroforestry.eu/conferences/III_EURAFConference

Box 9.2. The Third European Agroforestry Conference

The Third European Agroforestry conference (23-25 May 2016) organised by the European Agroforestry Federation (EURAF) was hosted by Dr Christian Dupraz (INRA) and the Book of Abstracts was edited by Dr Marie Gosme (INRA). The speakers on the first day included Stéphane Le Foll (French Minister of Agriculture), Emmanuel Petel and Gaétan Dubois (European Commission), Rosa Mosquera Losada (President of EURAF), and Alain Canet (President of the French Agroforestry Association (AFAF)). Talks were also provided by Andy Gordon and Mike Jacobsen on the state of agroforestry in North America, and by Mark Shepard on restoration agriculture.

The conference theme was "celebrating 20 years of agroforestry research in Europe", and although agroforestry research in some parts of Europe may be older, the conference was taking place 20 years after the "Agroforestry for Sustainable Land-Use" workshop that took place in Montpellier in June 1997. There were 287 registered delegates from 26 countries including China, the USA, and Canada, and a wide range of backgrounds. The themes for the four parallel afternoon sessions on the first day were: development of agroforestry in Europe, environmental benefits, innovations, and productivity and economic performance.

The second day included an option of one of three trips to see agroforestry in the field. The first option included a visit to Restinclières to see the silvoarable system with walnut trees and cereals including the positive impact on soil carbon and soil biology. The visit also included a vineyard agroforestry system and experimental plots with stone pine and Sorbus species. The second option was to see vegetable gardening agroforestry and the silvopastoral systems at Vézénobres. Field tour three covered the greatest distance; it included the management and use of box (*Buxus sempervirens*) on a pig and sheep-farm, the alley cropping of cereals and oilseed rape between walnut, and the intercropping of olive trees. Each of the three groups finished the day at Restinclières.

Integrating walnut production with the production of oilseed rape seed.

The final days included four parallel morning sessions focused on farmer testimonies, agroforestry and climate change, agroforestry products, and tree-crop interactions. The final afternoon session focused on agroforestry performance, agroforestry modelling, silvopastoralism, and agroforestry policy. A panel discussion focused on the farmers practicing agroforestry highlighted that farmers

were often looking for system-based solutions to improve the profitability and sustainability of their businesses. For many, agroforestry offered an alternative way to make better use of their own on-farm resources rather than focusing first on purchased inputs.

The meeting concluded with prizes for the best posters and an end of conference inspirational talk by Patrick Worms (from ICRAF). Overall there was a very positive and inspiring atmosphere to the conference and there was good attendance by farmers across Europe, many of whom were supported by national agroforestry associations. Whilst researchers may often focus on the tree, livestock or crop components of agroforestry, the really key "component" of successful agroforestry in the field are individuals who are willing to innovate.

9.7 Co-ordination

The last task (Task 9.7) is to co-ordinate and synthesise the work in work-package 9. This task is led by Fabien Liagre at AGROOF. Fabien has actively participated in the monthly Executive Committee and in the Second and Third General Assemblies.

9.8 Use of resources in work-package 9

At the end of June 2016, 40.51 person months had been allocated to work-package 9, equivalent to 51% of the total. As in work-package 4 and 6, INRA has allocated more person months than was described in the budget, but this will not affect their capacity to fulfil commitments to the milestones and deliverables in the final stage of the project.

Table 9.12. Person-month inputs to work-package 9

Organisation	First period (Jan-Dec 2014)	Second period (Jan 2015 to Jun 2016)	Sub-total	Project budget
AGROOF	3.90	8.97	12.87	18.0
EURAF	5.30	2.60	7.90	12.0
ISA	1.80	3.95	5.75	8.0
CRAN	1.18	1.45	2.63	7.0
ORC	0.26	0.56	0.82	5.0
Wervel	0.26	1.35	1.61	4.0
ACTA	0	0.18	0.18	3.5
AFAF	0.00	0.41	0.41	3.0
BTU	0.91	0	0.91	2.5
UEX	0.40	0.60	1.00	2.5
CREA	0.25	0.25	0.50	2.0
USC	0.20	1.40	1.60	2.0
TEI	0.46	0.03	0.49	1.0
EFI	0.34	0.01	0.35	1.0
INRA	0.27	1.13	**1.40**	1.0
UCPH	0	0	0	1.0
AU	0	0	0	1.0
APCA	0	0.12	0.12	1.0
NYME	0.27	0.10	0.37	0.5
CNR	0.13	0.19	0.32	0.5
LBI	0.11	0.33	0.44	0.5
VEN	0.11	0.25	0.36	0.5
AFBI	0.00	0.48	0.48	0.5
FDEA	0	0	0	0.5
UBB	0	0	0	0.5
ICRAF	0	0	0	0.0
Total	**16.15**	**24.36**	**40.51**	**79.0**

9.9 Issues and actions

In the 30 month progress report, no significant issues or actions are required. The team at AGROOF will continue to develop Deliverable 9.27 and Deliverable 9.29.

10 Project management during the period

This section summarises the management of consortium activities during the second reporting period. There have also been no major changes in the consortium although some partners have undergone name changes. The Executive Committee has met monthly using Skype and a full set of minutes is available on the intranet, and there have been successful second and third General Assembly meetings. We believe that there are no significant deviations in the planned milestones and deliverables, although there is a recommendation that Deliverable 1.3 is delayed to October 2016 (due to the poor health of a specialist researcher), and Deliverable 8.23 is delayed to 30 September 2016. The development of the project website has been described in Section 9.2, so it is not repeated here.

Work package number	**10**
Work package name	**Management**
Leader	Paul Burgess
Organisation	Cranfield University
Report period	1 January 2015 to 30 June 2016

Objectives and tasks within work package 10

Paul Burgess and Kenisha Garnett from Cranfield University are the Co-ordinator and the Project Administrator respectively. This section summarises the management of consortium activities during the period 1 January 2015 to 30 June 2016 (Table 10.1), and highlights some of the key milestones (Table 10.2).

Table 10.1. Work-plan of activities, milestones (M), and deliverables (D) for work-package 10 for month 12 to 30 (indicated in orange), and plans until month 36 (indicated in grey)

Month	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP10 Project management																									
T10.1 Co-ordination of the project																									
T10.2 Executive and General Assembly Meetings (MS41; MS42)	M						M						M						M						M
T10.3 Progress reports and final reports		X																		X					
T10.4 Financial reports		X																		X					

Table 10.2. Summary of the status of milestones and deliverables in work-package 8 for First Reporting Period (Month 0-12) and the Second Reporting Period (Month 13-30)

Description	**Due date**	**Status**
First reporting period		
Progress report (month 13)	January 2015	Completed
Financial report (month 13)	January 2015	Completed
Second reporting period		
MS41 Completion of internal interim reports	On-going	Completed and on-going
MS42 Minutes of meetings	On-going	Completed and on-going

10.1 Co-ordination of the project

The first management task (Task 10.1) continues to be the maintenance of effective project management and co-ordination. This includes quality assurance and reviewing the timely execution of tasks. The management structure for the project is shown in Figure 10.1. The meetings of the Executive Committee, the General Assembly and the External Experts Advisory Board are described in Section 10.2.

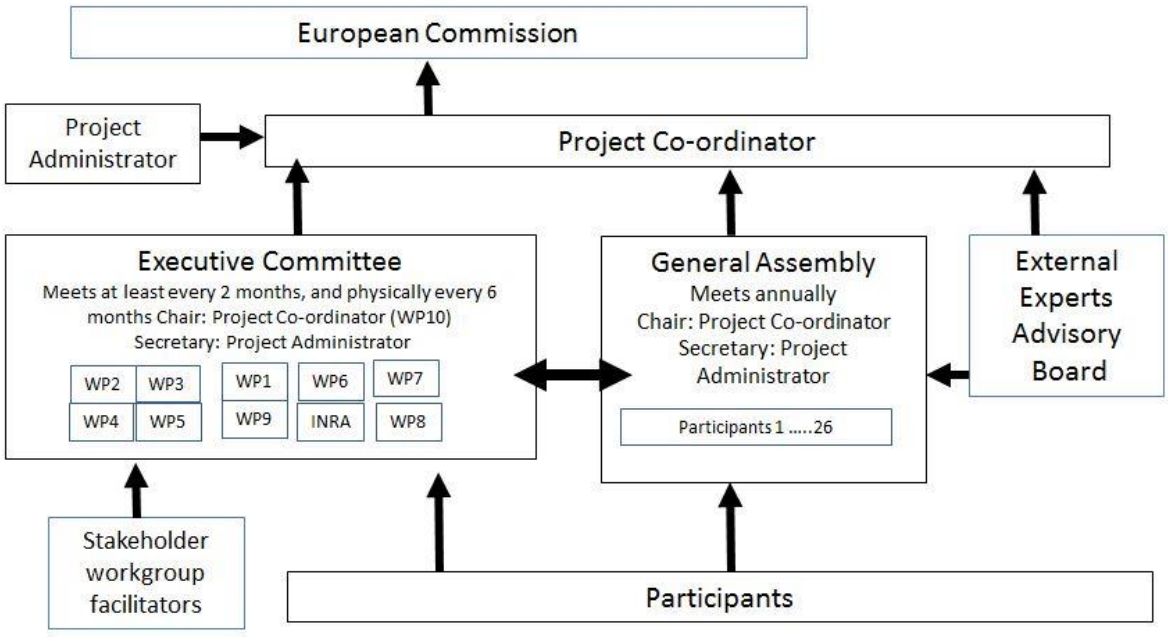


Figure 10.1. Management structure for the AGFORWARD project

A key role of the Co-ordinator is to ensure effective communication within the project. In addition to the meetings described in the next section, communication within the project is primarily achieved through e-mail communication, and through the use of an intranet "Sharepoint".

E-mail communication

The e-mail discussion list: AGFORWARD@jiscmail.ac.uk is the principal means of communication within the AGFORWARD community. An e-mail to the above address, from any member, is automatically circulated to the whole consortium. Subscription to the list is managed by Cranfield University. As of 30 June 2016, there were 111 people registered on the list. The archive system provided by Jiscmail means that there is a store of all e-mails sent.

A separate e-mail discussion list: EXEC-AGFORWARD@jiscmail.ac.uk is the principal means of communication within the Executive Committee. This allows detailed and focused discussion of specific points that are not of wider interest. Again the archive system provided by Jiscmail means that there is a store of all e-mails sent.

In addition to the above, a separate mailing list has also been established for the newsletter. As of 30 June 2016, there were 538 contacts on the mailing list. Some work-package groups have also established their own e-mail discussion groups.

Sharepoint

In order to prepare and store reports, presentations and minutes, an intranet "Sharepoint" site has been set up at Cranfield University in the UK, which can be accessed by the key participants on the projects (Figure 10.2). There is a link to the Sharepoint site from the AGFORWARD website. As of 30 June 2016, 72 participants have access to the Sharepoint service which is protected by usernames and passwords.

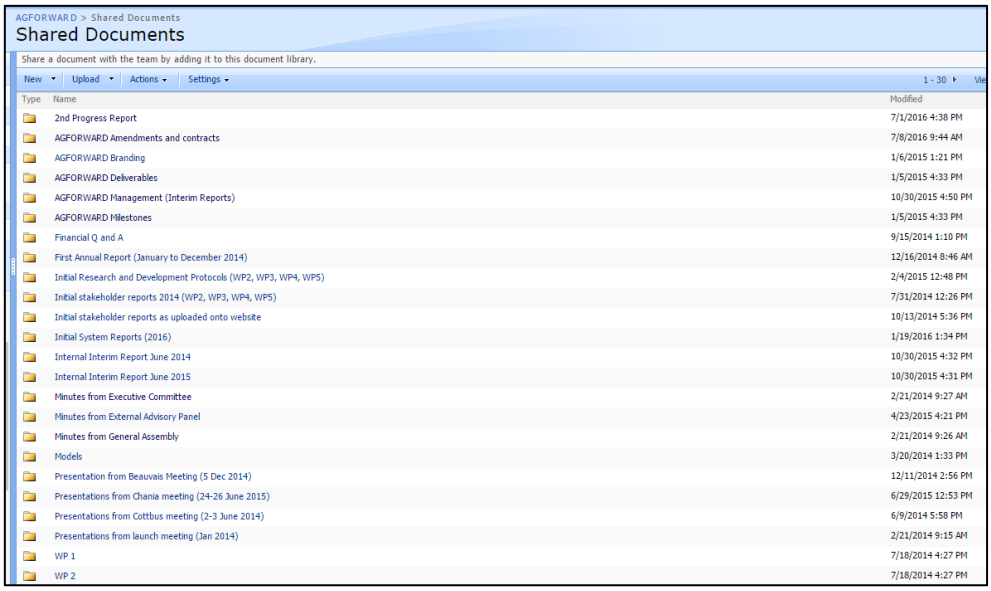


Figure 10.2. Screen shot of the AGFORWARD sharepoint or "intranet" site for file sharing and which is accessible to registered users from the AGFORWARD website

Links with other projects

AGFORWARD has supported AGROFE, which was an EU-funded Leonardo project, and Paul Burgess (Cranfield) and Rosa Mosquera-Losada (EURAF and USC) spoke at the final meeting of the AGROFE project in Brussels on 9 December 2015. TEI and AFAF are participants in a new project called AGROF-MM (September 2015 to August 2018) which is focused on extending the work of AGROFE in the area of agroforestry education in the Mediterranean and mountain regions of Europe. A link will be created between the training tool made in AGFORWARD (D9.29) and the AGROF-MM projects to share relevant resources.

10.2 Project meetings

The second management task (Task 10.2) is to prepare, chair and report on Executive Board and General Assembly meetings. The Launch Meeting and the First General Assembly were reported in the First Progress Report

Second General Assembly

The Second General Assembly Meeting was held at the Mediterranean Agronomic Institute of Chania (MAICh) on the outskirts of Chania in Crete. The meeting lasted from Wednesday 24 to Friday 26 June 2015, with an optional work-package 7 workshop on Tuesday 23 June 2015. The host was Professor Anastasia Pantera from TEI Stereas Elladas. In total 47 researchers attended the meeting, including 13 people for the first time. Each beneficiary was represented apart from Universitatea Babes Bolyai in Romania. The first two days of the Assembly mainly comprised workshops focused on advancing the various milestones and deliverables within the project. On Friday 26 June, the General Assembly included a field trip, led by Professor Vasilios Papanastasis, to see demonstrations of the implementation of agroforestry in Crete. This included the intercropping of orange trees, which is the focus of one of the stakeholder groups. The group also visited woodland grazing systems in the more mountainous parts of the country.

AGFORWARD has an External Expert Advisory Panel to provide guidance on our research. Two members of the Panel, Professor Shibu Jose from the University of Missouri and Professor PK Nair (accompanied by Professor Vimala Nair who paid her own way) from the University of Florida were able to join and play an active role in the workshop.

Figure 10.3. AGFORWARD participants and the External Expert Advisory Group at the Mediterranean Agronomic Institute of Chania (24 to 26 June 2015).

Third General Assembly

The Third General Assembly took place at Montpellier SupAgro from 26 to 27 May 2016, and was co-ordinated with the Third European Agroforestry Conference. Our hosts were Christian Dupraz, Marie Gosme, and Delphine Mézière from INRA. In total 48 AGFORWARD researchers attended the two day meeting and we were pleased to welcome six new participants. Each beneficiary was represented apart from Universitatea Babes Bolyai in Romania. Three members of the External Expert Advisory Panel attended and participated in the meeting: Professor Shibu Jose, Professor PK Nair (with Professor Vimala Nair who again covered her own costs) from the University of Florida. We also benefited from the inputs of Dr Gerry Lawson from Centre for Ecology and Hydrology in the UK, who is an expert on agroforestry policy.

Figure 10.4. AGFORWARD participants and the External Expert Advisory Group at Montpellier SupAgro in France (26 to 27 May 2016)

The General Assembly was primarily a working meeting with individuals working together to advance the completion of various milestones and deliverables. A comprehensive set of minutes is available on the intranet and has been circulated to all members of the consortium.

Executive Board

Between January 2015 and June 2016, there have been 18 regular monthly Executive Board Meetings. These have all been by Skype, with the exception of a physical meeting at Copenhagen on 4 December 2015. Each meeting has been chaired by the Co-ordinator (Table 10.3). The minutes of each meeting have been circulated to the Executive Committee for approval, and once approved they have been circulated to the members of the General Assembly and the AGFORWARD mailing

list for information. The minutes from the Second and Third General Assemblies comprise Milestone 42, and each is available on the AGFORWARD sharepoint site.

Table 10.3. Number and dates of Executive Board Meetings completed by Skype unless indicated. Minutes for each meeting are on the sharepoint site.

13	7 Jan 2015	22	7 Oct 2015
14	4 Feb 2015	23	4 Nov 2015
15	4 Mar 2015	24	4 Dec 2015 (Physical meeting at Copenhagen)
16	1 Apr 2015	25	14 Jan 2016
17	7 May 2015	26	3 Feb 2016
18	3 Jun 2015	27	9 Mar 2016
19	8 Jul 2015	28	13 Apr 2016
20	19 Aug 2015	29	11 May 2016
21	16 Sep 2015	30	9 Jun 2016

External Experts Advisory Board

Within its Description of Work, AGFORWARD indicate that it would create and implement an External Experts Advisory Panel, and that the members would participate in General Assembly meetings upon invitation. The role of the External Expert Advisory Board is provide critical and wise feedback on the project's operation and performance, and in critical cases to provide external quality control. We indicated that two of the members will come from outside of the EU and at least one member will come from within the EU. The original members included Professor Shibu Jose from the University of Missouri, and Professor PK Nair from the University of Florida, and Oana Neagu from Copa Cogeca (Table 10.4). With the agreement of the Executive Board, Dr Gerry Lawson was invited to join the Advisory Panel on 17 February 2016 in order to provide additional advice related to agroforestry policy. Dr Lawson is also an honorary Deputy President of the European Agroforestry Federation.

Table 10.4. Membership of the External Experts Advisory Panel

Name	Specialism
Prof Jose Shibu, University of Missouri, USA	Ecological research on agroforestry
Prof. PK. Nair, University of Florida, USA	Global agroforestry
Oana Neagu, Director at Copa Cogeca, Brussels	Rural development and forestry
Dr Gerry Lawson, CEH, Edinburgh, UK	European agroforestry policy

The three original members of the Panel contributed to a Skype-based meeting on Friday 20 March 2015 which covered issues such as terms of reference, non-disclosure agreements, and the format for the Second General Assembly. Minutes of the meeting are available on the intranet.

At the Second General Assembly, Professor Nair gave a presentation on global trends in agroforestry, and Professor Jose gave an inspiring talk about the uptake of agroforestry in North America (Table 10.5). They also participated actively in the workshops. One key advantage of their role is not only can they communicate the global aspects of agroforestry to the AGFORWARD group, but they can also explain to colleagues globally the agroforestry research that is happening in Europe.

Table 10.5. Presentations made by members of the External Experts Advisory Board at the Second General Assembly

Nair, PK (2015). Global Trends in Agroforestry: A Quick Overview. Presentation made to the 2nd General Assembly of the AGFORWARD project on 25 June 2015. Mediterranean Agronomic Institute of Chania, Crete, Greece. http://www.agforward.eu/index.php/en/news-reader/id-23-26-june-2015.html
Jose, S. (2015). Temperate Agroforestry in the 21st Century: A North American Perspective. Presentation made to the 2nd General Assembly of the AGFORWARD project on 25 June 2015. Mediterranean Agronomic Institute of Chania, Crete, Greece. http://www.agforward.eu/index.php/en/news-reader/id-23-26-june-2015.html

At the Third General Assembly, Professors Jose and Nair and Dr Lawson actively participated in each of the sessions, and Professor Jose and Dr Lawson provided a detailed critique on the project during the final meeting of the General Assembly (which are detailed in the minutes of the meeting). Professor PK Nair, Professor Vimala Nair, and Dr Lawson also contributed to the Third European Agroforestry Conference (Table 10.6).

Table 10.6. Presentations made by members of the External Experts Advisory Board at the Third European Agroforestry Conference which was held in conjunction with the Third General Assembly

Nair VD, Nair PKR, Chatterjee N, Dari B (2016). Sustainable land-application of Biochar in Agroforestry. In: 3rd European Agroforestry Conference Book of Abstracts, 124-127 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.
Lawson GJ, Balguer F, Palma JHN, Papanastasis V (2016). Options for agroforestry in the CAP 2014-2020. In: 3rd European Agroforestry Conference Book of Abstracts, 424-427 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.
Mosquera-Losada MR, Nair PKR (2016). Agroforestry and good governance: a comparison of the agroforestry policy in the EU and the USA. In: 3rd European Agroforestry Conference Book of Abstracts, 442-445 (Eds. Gosme M et al.). Montpellier, France, 23-25 May 2016.

10.3 Progress and final reports

The third management task (Task 9.3) is to co-ordinate the preparation and delivery of progress reports and the final report to the European Commission. The First Progress Report was submitted on 27 February 2015 and was approved. An internal interim report was collated in July 2015 (Milestone 41) and is available on the AGFORWARD intranet. This document comprises the report for the second reporting period.

10.4 Administration of financial matters

The fourth management task (Task 9.4) is to administer financial matters such as the proper distribution of monies to the partners, and the co-ordination and preparation of the financial reports.

In the First Project Report we reported that four participants were unable to initially submit their first year costs on 27 February 2015 because they had not registered their Legal Entity Appointed Representative. With the support of the European Commission, the last outstanding financial report was submitted on 7 May 2015.

Submission of financial claim for first reporting period

The European Commission agreed with the submitted claims for 1,281,782 Euros for the First Reporting Period, with the exception of 5,914 Euros claimed by AGROOF and 9,358 Euros claimed by EURAF. The eligible expenditure approved for each participant was distributed in a timely way to each participant.

First amendment to the General Agreement

Following the agreement of the Executive Board, on 4 November 2015 a first amendment to the General Amendment was proposed. This comprised the re-allocation of 27,900 Euros within the Louis Bolk Institute budget from personnel costs to the use of a contractor. Confirmation of the change by the European Commission was received by Cranfield University on 23 December 2015. Each member of the consortium indicated receipt of the change by 26 January 2016.

Second amendment to the General Agreement

Following the agreement of the Executive Board, on 3 May 2016, a second amendment was proposed to the General Agreement. The amendment comprised seven changes (Table 10.7). The European Commission agreed to the Second Amendment to the AGFORWARD Grant Agreement on 28 June 2016, which was received at Cranfield on 5 July. As of 3 August 2016 each participant has indicated receipt of the change with the exception of INRA.

Table 10.7. Seven changes made in the second amendment of the General Agreement

Item	Change
1	SLU, which is a third party of the European Forest Institute requested an internal budget re-allocation between direct costs to personnel costs
2	ACTA requested a change in the wording of the use of funds for a sub-contract from “access and technical analysis of a pre-verger experimental plot” to “the evaluation of the total biomass production of pollarded trees compared to non-pollarded trees”
3	Within Workpackage 7, because of problems with identifying a site in France, 2.84 person months and 12.268 Euros were reallocated from ACTA to Cranfield (+8483 Euros and +1.42 person months) and TEI (+3785 Euros; +1.42 person months).
4	A change in the PIC number for the Brandenburg University of Technology in Germany (BTU Cottbus-Senftenberg).
5	An internal budget re-allocation for ISA from a sub-contract (15,000 Euros) to personnel
6	An internal budget re-allocation for AFAF from personnel to a sub-contract (12,100 Euros)
7	An internal re-allocation of the budget at AGROOF due to account for changes in the cost of setting up the internet portal for AGFORWARD, together with a modification in the wording of a sub-contract.

Adjustments to financial claims for first reporting period

During the compilation of the financial reports for the second financial period, six organisations have made adjustments to the financial claims for the first reporting period. A brief explanation of the changes made is provided in Table 10.8.

Table 10.8. Explanations of adjustments made to the financial reports for the first reporting period at the end of the second reporting period.

Organisation	Work-package	Explanation and impact on direct costs
Cranfield	10	**Net reduction in costs and input:** Primarily reduction of 0.29 person months for Paul Burgess to correct a transpositional error in internal accounting records, and minor rate of pay adjustments for Angela Colclough and Hayley Shaw (-1854 Euros)
TEI	2 and 3	**Net reduction in costs:** removal of VAT included on salary (-374 Euros), plus removal of VAT on a range of items (-344 Euros) plus additional cost of some experimental consumables (+102 Euros)
INRA	4	**Net increase in costs:** corrections in the rate of pay costs of eight staff (+2632 Euros); the person months were correctly stated.
UCPH	7	**Net reduction in costs:** Transcribing error results in input of staff member (-334 Euros), correction of VAT (+11.61 Euros) and inclusion of missing travel expense (270 Euros)
NYME	2,4,8	**Net reduction in costs:** adjustment of personnel and travel costs due to a transpositional error and delayed data harmonisation (-1233 Euros)
NYME	9	**Net reduction in costs:** adjustment of personnel costs due to modification of rate of pay (-193 Euros)
AGROOF	9	**Net increase in costs:** AGROOF employed a subcontractor to provide guidance on the appropriate intranet platform for the Project and the results were presented at Cranfield (+3491 Euros)

10.5 Use of resources for management

As of 30 June 2016 (62% of the way into the project) 54% of the budgeted effort on management has been used. This is broadly in line with expectation as inputs are particularly in the period after project reporting.

Table 10.9. Person-month inputs to work-package 10

	First period (Jan-December 2014)	**Second period (Jan-Jun 2015)**	**Sub-total**	**WP10 Project total**
CRAN	4.07[a]	12.91	16.69	31.0

[a]: The Cranfield input for WP10 for the first period has been corrected from 4.07 to 3.78.

10.6 Summary of the use of person months across the project

The person months per work-package have been provided in earlier sections, but Table 10.10 and Table 10.11 provide an overview of the person-month inputs in the first reporting period and the second reporting period respectively. The combined total to the end of June 2016 is provided in Table 10.12. In total, 653 person-months (68% of the planned total for the four years) have been used in the first two reporting periods (62% of the project period). Allowing for the higher inputs from INRA, the rate of personnel input is broadly in line with expectation.

Table 10.10. Person-month inputs for each work-package and partner for the first reporting period (1 January to 31 December 2014)

Beneficiary	**Work-package number**										**Total**	**Full**
short-name	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**		**total**
CRAN[b]	0.27	2.93	2.70			2.13	0.71		1.18	**3.78**	13.70	110.0
EFI	11.46	1.47				0.37	0.33	0.76	0.34		14.73	36.0
SLU		1.24									1.24	
ACTA							1.26				1.26	18.5
IDF			0.44	0.34							0.78	
IDELE					1.60						1.60	
USC	0.20		1.80	1.80	1.80	0.10	0.50	1.70	0.20		8.10	55.0
TEI	0.26	1.21	3.92	1.48		0.56		0.26	0.46		8.15	46.0
INRA		5.34		8.19	3.54		8.18		0.27		25.52	103.0
ORC			1.34	3.90	4.49	0.11		0.15	0.26		10.25	46.0
BTU		3.14		6.69		1.78			0.91		12.52	50.5
UEX	1.00	6.10	2.05	1.65		0.10	1.50	0.10	0.40		12.90	67.5
ISA	0.25	2.50	0.25	0.25	0.25	11.64	1.00	0.50	1.80		18.44	89.5
UCPH							15.00				15.00	43.0
FDEA			0.18	0.49		0.04	2.95				3.66	40.5
Wervel								0.07	0.26		0.33	5.0
AU					1.50						1.50	22.0
AFBI[a]			**2.53**					**0.01**			**2.54**	16.5
CREA	0.12		5.25			0.13		0.25	0.25		6.00	34.0
LBI					1.94				0.11		2.05	15.5
CNR		2.25		1.50		0.20		0.50	0.13		4.58	18.5
NYME		1.64		2.13				0.08	0.27		4.12	19.5
UBB		1.07					0.71				1.78	20.5
VEN				0.66	1.57				0.11		2.34	11.5
AGROOF						0.20			3.90		4.10	23.0
APCA			0.68	1.29							1.97	10.0
AFAF	0.27		0.41	0.24				0.12			1.04	17.0
ICRAF	6.00										6.00	10.0
EURAF	0.35	0.20	0.20	0.20	0.20			2.60	5.30		9.05	35.0
Total	**20.18**	**29.09**	**21.75**	**30.81**	**16.89**	**17.36**	**32.14**	**7.10**	**16.15**	**3.78**	**195.25**	**963.5**

[a]: Note that the WP3 total for AFBI has been corrected from 2.09 to 2.53 and the WP8 total has been corrected from 0.00 to 0.01.

[b]: Note that the WP10 total for Cranfield has been adjusted from 4.07 to 3.78 as per Form C correction in August 2016.

Table 10.11. Person-month inputs for each work-package and partner for the second reporting period (1 January 2015 to 30 June 2016)

Beneficiary	**Work-package number**										**Total**	**Full**
short-name	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**		**total**
CRAN	0.73	3.02	7.88	0.07		16.54	0.69		1.45	12.91	43.29	110
EFI	14.17	2.51				0.04	2.92	0.96	0.01		20.61	36
SLU		1.93									1.93	
ACTA			1.86	2.65	2.03		1.31		0.18		8.03	18.5
USC	3.30		9.70	7.10	5.10	1.90	1.94	11.30	1.40		41.74	55
TEI	0.51	2.24	6.93	3.13		0.53		0.75	0.03		14.12	46
INRA		6.10		42.37	7.90	16.16	6.44		1.13		80.10	103
ORC			0.00	9.48	7.11	0.90		0.76	0.56		18.81	46
BTU		4.03		13.36		0.50					17.89	50.5
UEX	2.00	24.00	5.10	5.40		1.30	9.60	0.60	0.60		48.60	67.5
ISA	0.75	4.55	1.69	1.61	1.07	23.31	2.50	0.55	3.95		39.98	89.5
UCPH							14.49				14.49	43
FDEA			0.14	0.32			19.43				19.89	40.5
Wervel								0.08	1.35		1.43	5
AU					3.64						3.64	22
AFBI			2.51		2.77	0.83		0.41	0.48		7.00	16.5
CREA	0.25		16.25			0.25		0.25	0.25		17.25	34
LBI					6.86	0.58		0.48	0.33		8.25	15.5
CNR		3.38		2.25		0.37		0.75	0.19		6.94	18.5
NYME	0.25	3.26		3.73				0.26	0.10		7.60	19.5
UBB		3.19					4.31				7.50	20.5
VEN				1.18	3.29				0.25		4.72	11.5
AGROOF						1.50			8.97		10.47	23
APCA			1.50	1.55					0.12		3.17	10
AFAF	0.68		1.48	2.04				0.79	0.41		5.40	17
ICRAF											0.00	10
EURAF	0.30	0.10	0.30	0.30	0.30			0.90	2.60		4.80	35
Total	22.94	58.31	55.34	96.54	40.07	64.71	63.63	18.84	24.36	12.91	457.65	**963.5**

Table 10.12. Combined person-month inputs for each work-package and partner for the first two reporting periods (1 January 2014 to 30 June 2016)

Beneficiary	**Work-package number**										**Total**	**Full**
short-name	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**		**total**
CRAN	1.00	5.95	10.58	0.07		18.67	1.40		2.63	16.69	56.99	110
EFI	25.63	3.98				0.41	3.25	1.72	0.35		35.34	36
SLU		3.17									3.17	
ACTA			2.30	2.99	3.63		2.57		0.18		11.67	18.5
USC	3.50		11.50	8.90	6.90	2.00	2.44	13.00	1.60		49.84	55
TEI	0.77	3.45	10.85	4.61		1.09		1.01	0.49		22.27	46
INRA		11.44		50.56	11.44	16.16	14.62		1.40		105.62	103
ORC			1.34	13.38	11.60	1.01		0.91	0.82		29.06	46
BTU		7.17		20.05		2.28			0.91		30.41	50.5
UEX	3.00	30.10	7.15	7.05		1.40	11.10	0.70	1.00		61.50	67.5
ISA	1.00	7.05	1.94	1.86	1.32	34.95	3.50	1.05	5.75		58.42	89.5
UCPH							29.49				29.49	43
FDEA			0.32	0.81		0.04	22.38				23.55	40.5
Wervel								0.15	1.61		1.76	5
AU					5.14						5.14	22
AFBI			5.04		2.77	0.83		0.42	0.48		9.54	16.5
CREA	0.37		21.50			0.38		0.50	0.50		23.25	34
LBI					8.80	0.58		0.48	0.44		10.30	15.5
CNR		5.63		3.75		0.57		1.25	0.32		11.52	18.5
NYME	0.25	4.90		5.86				0.34	0.37		11.72	19.5
UBB		4.26					5.02				9.28	20.5
VEN				1.84	4.86				0.36		7.06	11.5
AGROOF						1.70			12.87		14.57	23
APCA			2.18	2.84					0.12		5.14	10
AFAF	0.95		1.89	2.28				0.91	0.41		6.44	17
ICRAF	6.00										6.00	10
EURAF	0.65	0.30	0.50	0.50	0.50			3.50	7.90		13.85	35
Total	**43.12**	**87.4**	**77.09**	**127.35**	**56.96**	**82.07**	**95.77**	**25.94**	**40.51**	**16.69**	**652.90**	**963.5**
Budget	42	109	113	130.5	92	183.5	124	59.5	79	31		

10.7 Summary of issues and actions

This final section provides a summary of the key changes in the consortium, recommendations related to any problems, and an update on gender awareness.

Changes in the consortium

There are no changes in the consortium since the First Progress Report and those indicated in Second Amendment to the General Agreement.

Problems and recommendations

At this stage of the project, there are only two recommendations in terms of modifying the plan from the Description of Work of 3 May 2016, as outlined in the previous sections of the report and summarised in Table 10.13. This is a recommended delay in Deliverable 1.3 from March 2016 to October 2016. In view of the circumstances, we consider that this change does not prejudice the overall outcome of the project. There is also a recommended delay in Deliverable 8.23 to September 2016. The report is almost ready for submission, but because policy can be a subjective issue, it is important that this report is appropriately edited and internally approved prior to submission.

Table 10.13. Recommended change to two deliverables

Deliverable	Lead	Change
Deliverable 1.3 Report describing the environmental and socio-economic framework conditions of current agroforestry in different regions across Europe.	EFI	The report in Month 27 (March 2016) has been delayed due to the ill health of a specialist researcher. The researcher is now back at work and the EFI team is now able to proceed with the analysis, so that the submission of the deliverable to the EC Portal will be completed by month 34 (October 2016). This output does not have knock-on effects on other outputs.
Deliverable 8.23 report describing the extent and success of current policy measures to promote agroforestry across Europe	USC	This report was originally due in month 16 (April 2015). In order to include the 2014-2020, a delay to October 2015 was recommended in the first progress report. A draft of the report has been produced but some values need recalculating, there is a need for some editing, and the report needs to be internally approved. We consider that the submission of the deliverable to the EC Portal is possible by 30 September 2016. This output is not rate-limiting to other outputs.

Gender awareness

Anastasia Pantera is our Gender Awareness Officer. At the application stage, there were 46 female participants (36%) and 81 male participants. We indicated that we would set a target rate of at least 37% of participants being female. At the General Assembly on 2 June 2014, the project involved 64 female participants (42%) and 86 male participants. By June 2015, there were 61 female participants (40%), and 93 male participants, so female participation remained above the target rate of 37%. By June 2016, this had changed to 72 female participants (48%) and 78 male participants.

10.8 Cited references in the report

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SECTION C Deliverables and milestones tables

This section summarises the completion and submission of the deliverables (Table C.1) and milestones (Table C.2) during the first year.

Table C.1. Deliverables due in the first 30 months; those that have been completed are shaded.

Del no	Del. no.[1]	Deliverable name	Ver-sion	WP no.	Lead beneficiary	Nature	Delivery date in annex 1	Actual delivery	Dissemination level[2]	Submit-ted	Comments
D9.25	D9.1	EU agroforestry interactive platform highlighting project for end-users	1	9	22 (AGROOF)	O	June 14	Mar 14	PU	Feb 2015	Website
D1.1	D1.1	Technology transfer options from Mediterranean Partner countries to European countries	1	1	25 (ICRAF)	Report	Dec 14	Dec 14	PU	Dec 2014	On website
D9.26	D9.2	Experimental and demonstration plots map	1	9	22 (AGROOF)	Map	Dec 14	Feb 15	PU	Feb 2015	On website
D8.23	D8.1	Extent and success of current policy measures to promote agroforestry across Europe		8	4 (USC)	Report	Apr 2015; delayed to Nov 2015	Plan: 30 Sept 2016	PU	Almost ready to submit	Draft completed, but needs editing and internal approval before submission
D1.2	D1.2	Current extent and trends of EU agroforestry, including maps	1	1	2 (EFI)	Report	Jun 15	Dec 2015	PU	Aug 2016	On website
D9.27	D9.3	Web-application of the models of Yield-SAFE and Farm-SAFE		9	10 (ISA)	Other: model	Jun 15	July 2016	PU	Aug 2016	On website

1 In the original description of work, deliverables were numbered using the convention <WP number>.<number of deliverable within that WP>. For example, deliverable 4.2 would be the second deliverable from work package 4.

2 **PU** = Public; **PP** = Restricted to other programme participants (including the Commission Services); **RE** = Restricted to a group specified by the consortium (including the Commission Services); **CO** = Confidential, only for members of the consortium (including the Commission Services).

Del no	Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Delivery date from annex 1	Actual delivery	Dissemination level	Submitted	Comments
D2.4	D2.1	Agroforestry of high natural and cultural value: components, structure, ecosystem services and economic value of selected systems	1	2	9 (UEX)	Report	Dec 15	June 2016	PU	Aug 2016	On website
D3.7	D3.1	Agroforestry for high value trees: components, structure, ecosystem services and economic value		3	5 (TEI)	Report	Dec 15	June 2016	PU	Aug 2016	On website
D4.10	D4.1	Agroforestry for arable farmers: components, structure, ecosystem services and economic value	1	4	8 (BTU)	Report	Dec 15	June 2016	PU	Aug 2016	On website
D5.13	D5.1	Agroforestry for livestock farmers: components, structure, ecosystem services and economic value	1	5	14 (AU)	Report	Dec 15	June 2016	PU	Aug 2016	On website
D7.19	D7.1	Synthesis of existing European agroforestry performance in terms of biodiversity, ecosystem services, and profitability	1	7	11 (UCPH)	Report	Dec 15	Nov 2015	PU	Aug 2016	On website
D9.28	D9.4	12 National Agroforestry Associations across Europe	1	9	26 (EURAF)	Other	Dec 15	Dec 2015	PU	Aug 2016	On website
D6.16	D6.1	Initial modelled outputs at field- and farm-scale to support best management practices for resource efficiency of agroforestry systems		6	6 (INRA)	Report	Feb 16	Aug 2016	PU	Aug 2016	On intranet
D1.3	D1.3	Environmental and socio-economic framework conditions of agroforestry in different regions		1	2 (EFI)	Report	Mar 16	Planned: Oct 2016	PU		Delay due to illness
D9.29	D9.5	Training tool-kit for farmers		9	22 (AGROOF)	Other: toolkit	Jun 16	Jun 2016	PU	Aug 2016	On website and submitted

Table C.2 Milestones as specified in Annex I to the Grant Agreement up to month 30. Milestones that have been completed are shaded

Mile stone No.	Milestone number	Milestone name	Means of verification	Work pack-age	Lead beneficiary	Delivery date from Annex 1	Achieved	Actual/ forecast achievem ent date	Comment
MS42	M10.2 (1)	Launch meeting minutes	Minutes	10	1 (CRAN)	Feb 14	Yes	Feb 14	On intranet
MS38	M9.1	Dissemination protocol	Report	9	22 (AGROOF)	Mar 14	Yes	Apr 14	On intranet
MS39	M9.2 (1)	Quarterly website update	Website	9	1 (CRAN)	Mar 14	Yes	Mar 14	On website
MS26	M6.1	Project database for pan-European simulated climate data	Database	6	10 (ISA)	Jun 14	Yes	Jun 14	On intranet
MS39	M9.2 (2)	Quarterly website update	Website	9	1 (CRAN)	Jun 14	Yes	Jun 14	On website
MS40	M9.3 (1)	Quarterly newsletter	Electronic	9	26 (EURAF)	Jun 14	Yes	Jul 14	On website
MS42	M10.2 (2)	Exec Committee and General Assembly minutes	Minutes	10	1 (CRAN)	Jul 14	Yes	Jul 14	On intranet
MS41	M10.1 (1)	Internal six-monthly report	Report	10	1 (CRAN)	July 14	Yes	Aug 14	On intranet
MS2	M2.1	Agroforestry of High Natural and Cultural Value Participative Network (WP2) established and first workshops undertaken	Reports of initial workshops on web	2	9 (UEX)	Aug 14	Yes	Aug-Dec 2014	On website
MS8	M3.1	Agroforestry for high value tree systems Participative Network (WP3) established and first workshops undertaken	Reports of initial workshops on web	3	5 (TEI)	Aug 14	Yes	Aug-Dec 2014	On website
MS14	M4.1	Agroforestry for arable systems Participative Network (WP4) established and first workshops undertaken	Reports of initial workshops on web	4	8 (BTU)	Aug 14	Yes	Aug-Dec 2014	On website

Mile stone No.	Milestone number	Milestone name	Means of verification	Work pack-age	Lead beneficiary	Delivery date from Annex 1	Achieved	Actual/ forecast achievement date	Comment
MS20	M5.1	Agroforestry for livestock systems Participative Network (WP5) established and first workshops undertaken	Reports of initial workshops on web	5	14 (AU)	Aug 14	Yes	Aug-Dec 2014	On website
MS39	M9.2 (3)	Quarterly website update	Website	9	1 (CRAN)	Sept 14	Yes	Sept 2014	On website
MS40	M9.3 (2)	Quarterly newsletter	Electronic	9	26 (EURAF)	Sep 14	Yes	Sept 2014	On website
MS1	M1.1	Preliminary stratification and quantification of agroforestry according to WP2-WP5 systems	Internal report	1	2 (EFI)	Dec 14	Yes	Jan 2015	On website
MS3	M2.2	Innovations to be examined in WP2 are agreed	Report	2	9 (UEX)	Dec 14	Yes	Jan 2015	On website
MS9	M3.2	Innovations to be examined in WP3 are agreed	Report	3	5 (TEI)	Dec 14	Yes	Jan 2015	On website
MS15	M4.2	Innovations to be examined in WP4 are agreed	Report	4	8 (BTU)	Dec 14	Yes	Jan 2015	On website
MS21	M5.2	Innovations to be examined in WP5 are agreed	Report	5	14 (AU)	Dec 14	Yes	Jan 2015	On website
MS31	M7.1	Standardised protocol for biodiversity, ecosystem services and farm profitability	Protocol	7	11 (UCPH)	Dec 14	Yes	Dec 2014	On intranet
MS32	M7.2	Selection of key agroforestry systems and 12 sample landscapes for landscape evaluation	Report	7	9 (UEX)	Dec 14	Yes	Jan 2015	On intranet
MS39	M9.2 (4)	Quarterly website update	Website	9	1 (CRAN)	Dec 14	Yes	Dec 2014	On website
MS40	M9.3 (3)	Quarterly newsletter	Electronic	9	26 (EURAF)	Dec 14	Yes	Jan 2015	On website
		First progress report					Yes	Feb 2015	On website

Mile stone No.	Milestone number	Milestone name	Means of verification	Work pack-age	Lead beneficiary	Delivery date from Annex 1	Achieved	Actual/ forecast date	Comment
MS4	M2.3	Experimental protocol for WP2 agreed	Protocol	2	9 (UEX)	Jan 15	Yes	Oct 2015	On website
MS10	M3.3	Experimental protocol for WP3 agreed	Protocol	3	5 (TEI)	Jan 15	Yes	Oct 2015	On website
MS16	M4.3	Experimental protocol for WP4 agreed	Protocol	4	4 (BTU)	Jan 15	Yes	Oct 2015	On website
MS22	M5.3	Experimental protocol for WP5 agreed	Protocol	5	14 (AU)	Jan 15	Yes	Oct 2015	On website
MS36	M8.1	Map and indicators of agroforestry policies across EU	Map	8	4 (USC)	Feb 15	Yes	Jan 2016	On website
MS27	M6.2	Identification of agroforestry systems and innovations to be modelled in project	Report	6	10 (ISA)	Feb 15	Yes	Sept 2015	On website
MS42	M10.2 (3)	Exec Committee minutes	Minutes	10	1 (CRAN)	Feb 15	Yes	Feb 2015	On intranet
MS39	M9.2 (5)	Quarterly website update	Website	9	1 (CRAN)	Mar 15	Yes	Mar 2015	On website
MS40	M9.3 (4)	Quarterly newsletter	Electronic	9	26 (EURAF)	Mar 15	Yes	May 2015	On website
MS28	M6.3	Database with description of key components to be modelled	Database	6	10 (ISA)	Jun 15	Yes	Jan 2016	On website
MS39	M9.2 (6)	Quarterly website update	Website	9	1 (CRAN)	Jun 15	Yes	Jun 2015	On website
MS40	M9.3 (5)	Quarterly newsletter	Electronic	9	26 (EURAF)	Jun 15	Yes	Aug 2015[3]	On website
MS41	M10.1 (2)	Internal six-monthly report	Report	10	1 (CRAN)	Jul 15	Yes	Oct 2015	On intranet
MS42	M10.2 (4)	Exec Com/General Assembly minutes	Minutes	10	1 (CRAN)	Jul 15	Yes	Sept 2015	On intranet
MS29	M6.4	Improvement of existing Yield-SAFE model for proposed innovations	Model	6	1 (CRAN)	Aug 15	Yes	April 2016 updated June 2016	On website
MS30	M6.5	Improvement of the Hi-sAFe model for proposed innovations	Model	6	6 (INRA)	Aug 15	Yes	Jul 2016	On website

[3] Combined with M9.3(6)

Mile stone No.	Milestone number	Milestone name	Means of verification	Work pack-age	Lead beneficiary	Delivery date from Annex 1	Achieved	Actual date	Comment
MS39	M9.2 (7)	Quarterly website update	Website	9	1 (CRAN)	Sep 15	Yes	Sep 2015	On internet
MS40	M9.3 (6)	Quarterly newsletter	Electronic	9	26 (EURAF)	Sep 15	Yes	Aug 2015[4]	On internet
MS37	M8.2	Report detailing the scenarios to be used for M7.4 in WP7	Report	8	4 (USC)	Oct 15	Yes	Jun 2016	On intranet
MS33	M7.3	Spatial characterisation of sample landscapes	Database	7	20 (UBB)	Dec 15	Yes	Jul 2016	On intranet
MS34	M7.4	Definition of scenario framework to be used in tasks to task 7.6	Report	7	12 (EVD)	Dec 15	Yes	Mar 2016	On intranet
MS39	M9.2 (8)	Quarterly website update	Website	9	1 (CRAN)	Dec 15	Yes	Dec 2015	On internet
MS40	M9.3 (7)	Quarterly newsletter	Electronic	9	26 (EURAF)	Dec 15	Yes	Nov 2015	On internet
MS41	M10.1 (3)	Internal six-monthly report	Report	10	1 (CRAN)	Dec 15	Yes	Jul 2016	On intranet
MS42	M10.2 (5)	Exec Committee minutes	Minutes	10	1 (CRAN)	Feb 16	Yes	Feb 2016	On intranet
MS39	M9.2 (9)	Quarterly website update	Website	9	1 (CRAN)	Mar 16	Yes	Mar 2016	On internet
MS40	M9.3 (8)	Quarterly newsletter	Electronic	9	26 (EURAF)	Mar 16	Yes	Feb 2015	On internet
MS35	M7.5	Cost-benefit analysis of selected AF systems at landscape scales	Database	7	1 (CRAN)	Jun 16	Yes	Jul 2016	On intranet
MS39	M9.2 (10)	Quarterly website update	Website	9	1 (CRAN)	Jun 16	Yes	Jun 2016	On website
MS40	M9.3 (9)	Quarterly newsletter	Electronic	9	26 (EURAF)	Jun 16	Yes	Jun 2016	On website
		Progress report							
MS42	M10.2 (6)	Exec Com and Gen. Ass. minutes	Minutes	10	1 (CRAN)	Jul 16	Yes	Jun 2016	On intranet

[4] Combined with M9.3(5)

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