



Project Number: 036212

Project Acronym: EUPHRESCO

Instrument: ERA-NET

Thematic Priority: Integrating and Strengthening the European Research Area



Final Project Report

Period Covered: 1st May 2006 – 31st July 2010

Date of Preparation: 14th September 2010

Start Date of Project: 1st May 2006

Duration: 51 months

Project Coordinator: Dr Alan Inman
Department for Environment, Food & Rural Affairs
The Food and Environment Research Agency
Email: alan.inman@fera.gsi.gov.uk

Project Office:
Email: euphresco@fera.gsi.gov.uk

Revision: 15th September 2010



Table of Contents

	Page Number
Section 1: Project Execution	3
1.1. Project Objectives	3
1.2. Partners involved	4
1.3. Major results and achievements (by workpackage)	5
1.4. Impacts of EUPHRESCO	8
Section 2: Dissemination and use	11
2.1. Exploitable knowledge and its use	11
2.2. Dissemination of knowledge	11
2.3. Publishable results	12

Section 1: Project Execution

1.1. Project Objectives

EUPHRESCO was a €2.63 million project funded under the 6th framework programme from 2006 to 2010. The Project was a partnership of 24 leading organisations involved with funding phytosanitary (regulated plant health) research in 17 European countries. The Project was fully supported by the EU Council Working Party of Chief Officers for Plant Health Services (COPHS). It also involved the EC's Directorate General for Health and Consumers (DG SANCO), the European and Mediterranean Plant Protection Organisation (EPPO) and the European Food Safety Authority (EFSA) Plant Health Directorate, all of which participate through an Expert Advisory Group.

Over the last century, the rate of introduction and establishment of new, economically or environmentally damaging plant pests and diseases has increased as a result of the expansion in global trade of plant material. Policy designed to protect Europe's agriculture and environment from these pest threats is determined at the EU level. However, the research that underpins policy has been undertaken primarily at the national level and there has been little or no coordination of these programmes.

EUPHRESCO therefore aimed to increase cooperation and coordination of national phytosanitary (statutory plant health) research programmes at the EU level through networking of research activities and potential mutual opening of national programmes

EUPHRESCO Objectives

EUPHRESCO addressed the strategic objective of the Framework 6 Programme 'Integrating and Strengthening the European Research Area' by 'Supporting the Cooperation and Coordination of Research Activities Carried out at National and Regional Levels'. EUPHRESCO aimed to increase cooperation and coordination of national phytosanitary research programmes at the EU level through networking of research activities and potential mutual opening of national programmes, to achieve three main over-arching strategic goals:

1. Develop phytosanitary (statutory plant health) research policy at the EU-wide level.
2. Optimise the research provision that underpins EU quarantine plant health policy development and policy implementation, in an era of increasing biosecurity threats from alien plant pests, diseases and invasive species.
3. Increase the capacity of European phytosanitary science and research, in order to prevent the disappearance of EU expertise in this field and maintain Europe's competitiveness in the global market.

The EUPHRESCO objectives were implemented through five workpackages (WP):

WP1 "Project coordination, management, communication and dissemination"

WP2 "Mapping and analysis of existing research and current needs"

WP3 "Developing instruments and preparing for pilot projects"















WP4 "Test, evaluate and refine instruments through pilot projects"

WP5 "Develop trans-national agendas, a long-term, sustainable coordination Network for implementing joint activities, and investigate external linkages to other disciplines"

1.2. Project Partners

EUPHRESCO was composed of 23 Partners from 17 European countries. The Project also comprised Observers from Government Bodies in six Member States.

Partners

- | | | |
|---|----|---|
|  | 1 | The Department for Environment, Food & Rural Affairs, UK - Coordinator |
|  | 3 | The Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), Austria |
| | 4 | The Austrian Agency for Health and Food Safety (AGES), Austria |
| | 5 | The Institute for Agricultural and Fisheries Research, (ILVO), Belgium |
|  | 6 | The Federal Public Service for Public health, Food Chain Safety and Environment (FPS), Belgium |
|  | 7 | The National Service for Plant Protection (NSPP), Bulgaria |
|  | 8 | The Agricultural Research Institute (ARI), Cyprus |
|  | 9 | Ministry of Agriculture (NAAR), Czech Republic |
|  | 10 | The Directorate for Food, Fisheries and Agri Business (DFFAB), Denmark |
|  | 11 | The Ministry of Agriculture and Forestry (MMM-FI), Finland |
|  | 12 | The Ministry of Agriculture and Fishery, General Food Directorate (MAP-DGAL), France |
| | 13 | Institut National de la Recherche Agronomique (INRA), France |
|  | 14 | The Federal Ministry Food, Agriculture and Consumer Protection (BMELV), Germany |
| | 15 | The Julius Kühn Institute (JKI), Germany |
|  | 16 | The Department of Agriculture, Food and Fisheries (DAFF), Ireland |
|  | 17 | The Ministry of Agricultural, Food and Forestry Policies (MiPAFF), Italy |
| | 18 | The Agricultural Research Council (CRA), Italy |
|  | 19 | The Ministry of Agriculture, Nature and Food Quality (LNV), The Netherlands |
| | 20 | The Plant Protection Service (PD), The Netherlands |
|  | 21 | The Ministry of Agriculture, Forestry and Food (MAFF), Slovenia |
|  | 22 | The Plant Protection Department of The National Institute of Agriculture Research (INIA), Spain |
|  | 23 | The Swiss Federal Office for Agriculture (FOAG), Switzerland |
|  | 24 | The Ministry of Agriculture and Rural Affairs, General Directorate of Agricultural Research (MARA GDAR), Turkey |

Observers

- | | |
|---|---|
|  | Ministry of Agriculture, Plant Health Department, Estonia |
|  | Ministry of Rural Development and Food, Department of Phytosanitary Control, Greece |
|  | Ministry of Agriculture and Rural Development, Plant Protection and Soil Conservation Department, Hungary |
|  | Ministry of Agriculture, Lithuania |
|  | Ministry for Rural Affairs and The Environment, Malta |
|  | Ministry of Agriculture, Direcção-Geral de Protecção das Culturas, Portugal |

1.3. Major Results and Achievements (by Workpackage)

WP1 – Project coordination, management, communication and dissemination

WP1 was responsible for organising meetings, producing reports, knowledge management and communication and project administration. Its stated objectives were:

- To manage and coordinate the Phytosanitary ERA-NET
- To communicate the aims and progress of the Phytosanitary ERA-NET
- To share/disseminate project outputs for the wider benefit of non-participating European phytosanitary research funders, other European stakeholders, including industry bodies and technology platforms, and appropriate Non-EU plant health bodies.

Meetings: The EUPHRESCO consortium held 6-monthly Project Meetings and Network Management Group Meetings to progress the project's technical work. The vision and ambitions of the Project were presented and discussed at the kick-off meeting in York. Governing Board Meetings were held annually. Other ERA-Net Coordinators or their representatives attended some Project Meetings to share their experiences.

Reports: EUPHRESCO produced 6-monthly interim reports for the Commission, as well as fuller Management and Activity Reports at 18, 36 and 51 months. Reports were prepared for the annual Governing Board meetings. Six-monthly progress reports were also prepared for the COPHS.

Communication and Knowledge Management: WP1 developed and continually maintained the project website <http://www.euphresco.org>, produced leaflets, 6-monthly newsletters, a range of articles (see Section 2 and EUPHRESCO website).

Publications: <http://www.euphresco.org/public/publications/index.cfm>

Partners also attended meetings of other projects and for (e.g. relevant COST actions; The ENDURE Network of Excellence; meetings of the European Mycological Network and the European Association of Phytobacteriologists; meetings organised by the Commission for ERA-Nets and Technology Platforms in the KBBE area). EUPHRESCO also presented itself at a stand at the 2008 International Congress of Plant Pathology and at key conferences, e.g. those held by EPPO and EFSA. A Final Dissemination Conference was held at York (30 June to 1st July 2010) which presented the key outcomes of the project, experiences and lessons learned from joint activities (the learning-by-doing) and posters covering all the 11 pilot research projects and additional projects that had since been initiated, or were under development. All Project Deliverables were made available on the website, as were final research reports from the Pilot Research Projects initiated via EUPHRESCO.

Administration: EUPHRESCO produced and maintained a consortium agreement and risk register.

WP2 – Mapping and analysis of existing research and of current needs

This workpackage's stated objectives were:

- To systematically gather information on existing phytosanitary research programmes, infrastructures and resources; identify relevant national industry representatives; and to map any pre-existing regional/national linkages between research programmes.
- To evaluate and analyse the gathered information to identify: overlaps, gaps, duplication, strengths/weaknesses, opportunities and common research priorities.

- To develop common instruments and 'principles' for best practice.

WP2 was launched at the start of the project in May 2006. WP2 produced a questionnaire that was made available for partners to complete online in March 2007 and a shortened version for non-partners to complete in July 2007. WP2 produced a mapping and analysis report (Deliverable DL2.2) on the national phytosanitary research programmes; it was published in January 2008 and can be found on the EUPHRESCO website.

Mapping and Analysis Report:

<http://www.euphresco.org/downloadFile.cfm?id=227>

This report formed a sound basis for developing future trans-national research strategy and agendas by highlighting gaps and opportunities.

WP2 also developed a guide of "common principles" for setting up phytosanitary research programmes for countries where none currently exists, so that the potential trans-national research collaboration is facilitated.

Common principles guide:

<http://www.euphresco.org/public/publications/index.cfm?id=28>

WP2 also updated the internal database of national phytosanitary research projects and some limited programme information (e.g. annual budgets).

WP3 – Developing instruments and preparing for pilot projects

This work package's stated objectives were:

- To develop the instruments, mechanisms and processes needed to enable joint trans-national activities and funding of a future transnational phytosanitary research programme.
- To prepare for pilot projects to test instruments.

WP3 developed the mechanisms, instruments and tools needed to enable joint transnational activities. They produced definitions of the three funding mechanisms (real common pot, virtual pot and non-competitive mechanism) that were tested, together with pilot project criteria that facilitated the selection process for pilot topics in 2008. One of the achieved criteria was that all of the 17 EUPHRESCO countries (22/24 partners) fund at least one topic, thereby satisfying the learning-by-doing principle behind the pilot topics. All the topics also directly underpinned plant health policy or operations and contributed to building Europe's phytosanitary science capacity and capability. The funds committed to the Pilot calls (VP and RP) amounted to about €1.5 million, which equates to about 10% of the total annual budgets across EUPHRESCO partners. The processes, tools and instruments developed for the calls were collated into a draft 'operational handbook'. The draft 'operational handbook' was transferred to WP4 and it was refined and finalised once the pilot projects and their associated processes were evaluated. The final handbook is publicly available from the website. The pilot calls were launched via WP4 in 2008. Development of a second round of non-competitive topics was begun in early 2009. This second round of topics was additional to the contract but was done to maintain momentum and build on the success of the first round of trans-national commissioning.

The topics in the pilot calls and second round were:

Pilot calls and projects:

Real common pot

- Whole genomic amplification of pest DNA or RNA (Q-AMP)

- Management of alien invasive aquatic macrophytes (DeCLAIM)

Virtual common pot

- Detection and epidemiology of posiviroids (DEP)
- Management of grapevine Flavescence dorée phytoplasma (PROPSCAPH)
- Diagnostics for fireblight, *Erwinia amylova* (ERWINDECT)
- Phytosanitary kiln drying efficiency (PEKID)
- Management of *Ambrosia artemisiifolia* (AMBROSIA)

Non-competitive mechanism

- Diagnostics of whitefly transmitted viruses
- Diagnostics for potato cyst nematodes (*Globodera pallida* and *G. rostochiensis*)
- Diagnostics for potato brown rot (*Ralstonia solanacearum*) and potato ring rot (*Clavibacter michiganensis* subsp. *sepidonicus*)
- Diagnostics for maize bacterial blight (*Pantoea stewartii* subsp. *stewartii*)
-

Second round of non-competitive topics:

- Bacterial phylogenetic identification methods
- *Meloidogyne* detection and management
- Phytoplasmas in orchards (diagnostics)
- *Anoplophora* risk management
- *Fusarium circinatum* diagnostics
- Potato wart disease diagnostics.

Final reports of projects that were of immediate policy relevance were provided directly to The Commission's DG SANCO and its Standing Committee on Plant Health.

WP4 – Test, evaluate and refine instruments through pilot projects

This workpackages stated objectives were:

- To trial (pilot), evaluate and refine the instruments needed for transnational collaboration and trans-national funding of research.
- To establish common, proven instruments and mechanisms for use beyond the end of the ERA-NET.

WP4 launched the planned pilot calls and led the commissioning of 11 pilot projects, each running for 12–18 months. Competitive calls were launched for both a virtual common pot and for a real common pot using the tools and processes developed within the EUPHRESCO Project. The virtual common pot call followed a one-stage application process and there was no competition between the 5 topics; each EUPHRESCO partner only funded the participation of its own national researchers in any successful proposal. The real common pot call followed a two-stage application process and there was competition between the two topics; there could be a trans-national flow of funds. After peer review and consideration by the funders in the call steering committees, 5 projects were commissioned from the virtual common pot call and 2 from the real common pot call. The total funding commitment across all these competitively-let projects was about €1.5 Million, (equating to about 10% of total national budgets). Additional to the competitively-let project, 4 non-competitive projects were initiated in March 2008; all involved the validation or ring testing of diagnostic methods for specific regulated plant pests or pathogens. WP4 also evaluated all the processes and tolls used via questionnaires sent to funders, contractors, peer reviewers and other key 'actors'. The analysis report of mechanisms, tools and processes (Deliverable 4.1) is available on the website. <http://www.euphresco.org/public/publications/index.cfm?id=28>

The tools were then revised in the light of lessons learnt and recommendations made. The final operations handbook (Deliverable 4.2) is available from the website:

<http://www.euphresco.org/public/publications/index.cfm?id=28>

WP5 – Develop trans-national agendas, a long-term, sustainable coordination network for implementing joint activities and external linkages to other disciplines

This workpackage's stated objectives were

- To develop a common research agenda based on shared priorities resulting in a proposed programme for trans-national funding at the end of the ERA-NET.
- To establish an infrastructure that will ensure long-term sustainability of the research funder network beyond the end of the ERA-NET. This network would continue to coordinate, develop and implement transnational phytosanitary research. In addition, it would also maintain and develop further links to industry and other national and international organisations.
- To explore and improve linkages with other priority disciplines relevant to plant health needs (review of inter-disciplinary linkages and needs).

WP5 developed a common strategic research agenda based on shared priorities that will support continued trans-national research activities at the end of the ERA-NET in 2010. This common strategic research agenda was based on: information collected from the WP2 questionnaire in 2007; an international workshop on '*Future Research Agendas*' held in Prague in May 2008; national workshops held in their individual countries in 2008/9; and an international workshop, '*Building and Influencing Transnational Phytosanitary Research Strategies for Europe*', held in Braunschweig in May 2009. The common strategic research agenda (Deliverable 5.1, incorporating the linkages review of Deliverable 5.3) was presented to, and approved by, the Governing Board in May 2010 and is available on the website:

<http://www.euphresco.org/public/publications/index.cfm?id=28>

WP5 also developed a *modus operandi* and structure for the long-term self-sustainable network of phytosanitary research funders. This was again presented to, and approved by, the Governing Board in May 2010. It will be tested and refined further in the EUPHRESCO-II Project funded under the European Union's seventh framework programme (FP7) scheduled to start in January 2011. The current *modus operandi* and network structure (Deliverable 5.2) developed with the current EUPHRESCO Project (2006-2010) is available from the website:

<http://www.euphresco.org/public/publications/index.cfm?id=28>

In relation to the EU's Seventh Framework Programme (FP7), EUPHRESCO has advised The Commission and Member States on Plant Health research priorities suitable for EU funding under FP7. This has been done under a mandate from the EU Council Working Party of Chief Officers of Plant Health Services (COPHS). EUPHRESCO has therefore fulfilled its aim to better coordinate national, trans-national and EU-funded plant health research to ensure best value for money and research outputs that better underpin plant health policy and operations. EUPHRESCO has also advised the Standing Committee of Agricultural Research (SCAR) on Plant Health Research Infrastructure needs, and participated in ENDURE's (Network of Excellence of Sustainable Pesticide Use) Crop Protection Network.

1.4. Impact of EUPHRESCO

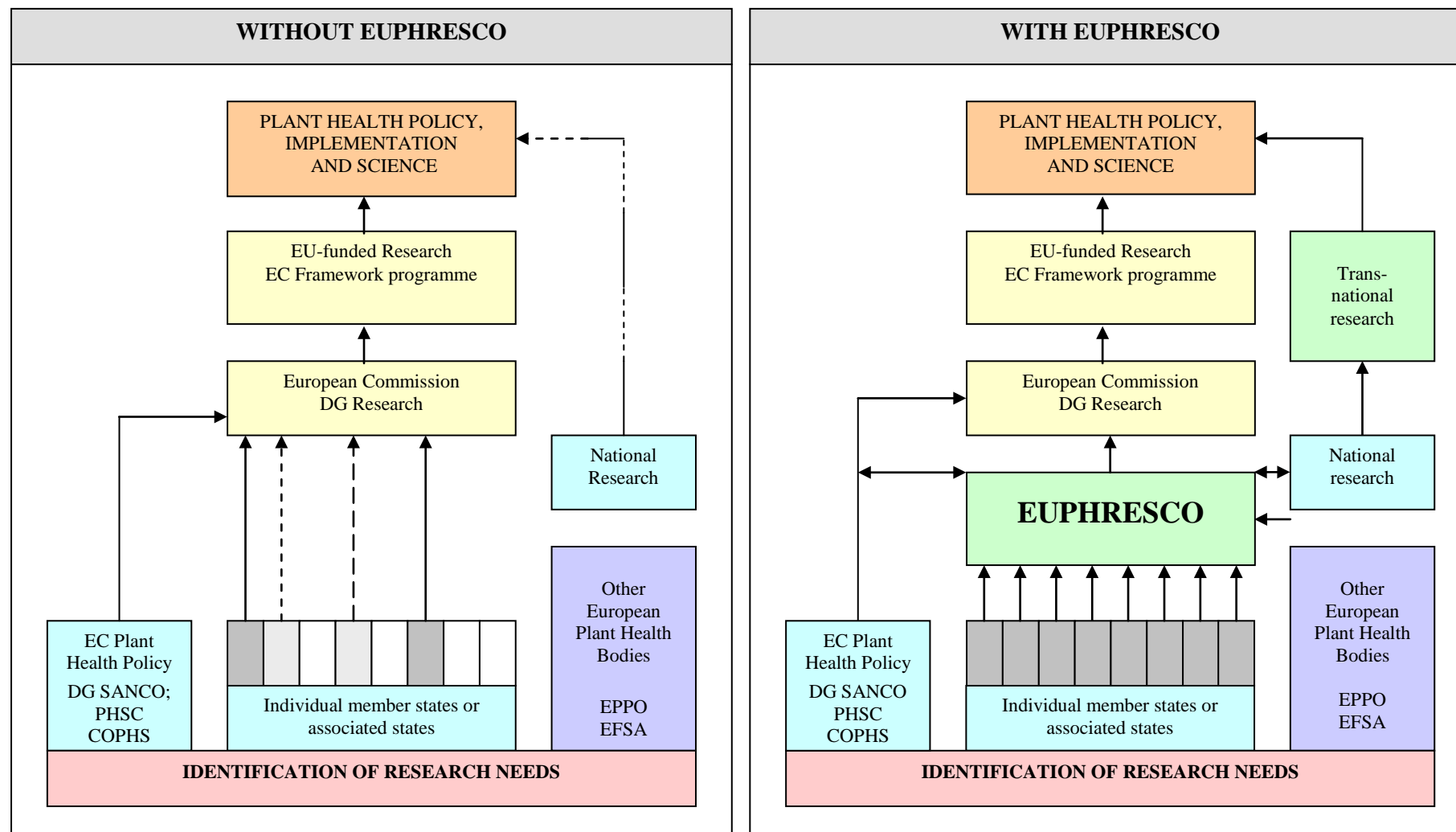
EUPHRESCO has achieved its three major objectives to:

- Better coordinate, for the very first time, plant health research in support of phytosanitary (statutory plant health) policy and its implementation (i.e. via inspection services) at the EU level.
- Develop and maintain phytosanitary science capability
- Optimise the use of limited resources by preventing duplication, pooling resources and improving coordination between national programmes and between transnational activities (via EUPHRESCO) and EU funded plant health research.

EUPHRESCO has:

- Mapped and analysed 46 national plant health research programmes (35 from EUPHRESCO countries and 11 from non-partner countries in Europe and the EPPO region).
- Produced a Mapping and Analysis report which identifies gaps and opportunities that could be addressed through transnational research coordination and collaboration.
- Developed tools and processes for three separate funding mechanisms: real common pot; virtual common pot and a non-competitive mechanism for implementing transnational research.
- Tested the three different funding mechanisms through the commissioning of 11 transnational pilot projects (in a 'learning-by-doing' exercise): 2 from a real common pot call; 5 from a virtual common pot call; 4 from a non-competitive funding mechanism. The funding committed across the competitively-let projects was about €1.5 million, which related to 10% of the national annual budgets (the 4 non-competitive projects provided a significant amount of additional funding).
- Funded other non-competitive projects that were additional to the pilot projects.
- Evaluated the mechanisms, tools and processes used for transnational research and produced an operational handbook and toolbox.
- Coordinated national, transnational and EU-funded research to optimise research outputs. EUPHRESCO advises the European Commission on plant health research priorities in its 7th Framework Programme under a mandate from the EU Council Working Party of Chief Officers of Plant Health Services (COPHS). EUPHRESCO's advisory role has contributed to key strategic topics being included in FP7 calls and projects emerging on: Developing the science of pest risk analysis (PRATIQUE Project); Developing DNA barcoding methods for quarantine pests (QBoL Project); Developing field-based detection tools for use by plant health inspection services (Q-DETECT Project).
- Developed a common strategic research agenda.
- Developed a model structure and *modus operandi* for a strong, long-term and self-sustainable network of plant health research funders.
- Supported Plant Health policy and its implementation through transnational research.

The impact of EUPHRESCO on the coordinating and structuring the plant health research area, and its impact on the phytosanitary area more widely, can be summarised in the following diagram:



Key: DG SANCO (European Commission General Directorate of Health and Consumer Affairs); COPHS (EC Council Working Party of Chief Officers of Plant Health Services); EPPO (European and Mediterranean Plant Health Organisation); EFSA (European Food Safety Authority)

Section 2: Dissemination and use of knowledge

2.1. Exploitable knowledge and its use

There is no exploitable knowledge

2.2. Dissemination of knowledge

Please see the table below for a list of the Project's dissemination activities over its lifetime.

Planned/ actual dates	Type	Audience	WP
May 06	Website	Stakeholders	1
May 06	Plenary presentation	Annual Balkan week for plant health	1
Jun 06	Presentation at EC workshop - KBBE ERA-NETs and SCAR	ERA-NET coordinators	1
Sep 06	Plenary presentation at EPPO Colloquium	EPPO members	1
Sep 06	Paper following EPPO Colloquium	EPPO members	1
Oct 06	Press release template	Stakeholders	1
Dec 06	EC workshop – finances	ERA-NET coordinators	1
Feb 07	Leaflet	Stakeholders	1
Feb 07	Newsletter – issue 1	Stakeholders	1
Apr 07	Presentation	EMN	5
Jun 07	EU Parliament magazine article	EU; Magazine distribution	1
Jul 07	Newsletter – issue 2	Stakeholders	1
Oct 06	Letter to IPPC (FAO) secretariat	IPPC Secretariat	1
Jul 07	6-monthly update paper	COPHS/SANCO	1
Dec 07	Progress report to COPHS	COPHS	1
Dec 07	Plenary presentation at EFSA plant health risk assessment colloquium	EFSA plant health panel; DG-RTD; PRA scientists	1
Jan 08	Newsletter – issue 3	Stakeholders	1
Jan 08	Mapping and Analysis Report (DL2.2)	Stakeholders	1
Feb 08	Presentation	ISHS	4
Mar 08	Public Service Review article (issue15)	Government officials	1
Jun 08	Progress report to COPHS	COPHS	1
Aug 08	Exhibition stand	ICPP delegates: scientists; policy makers; non-EU research funders	1
Aug 08	Newsletter – issue 4 IPPC special	ICPP delegates: scientists; policy makers; non-EU research funders	1
Dec 08	Progress report to COPHS	COPHS	1
Feb 09	Newsletter – issue 5	Stakeholders	1
Feb 09	ERA-Net and CWG workshop	ERA-nets and CWGs	1
Apr 09	Progress report on EPPO website	EPPO members	1
May 09	Workshop on transnational research agendas at Braunschweig, Germany	Stakeholders	5
May 09	Presentation at EPPO Diagnostic conference	Phytosanitary Scientists	
Jun 09	Progress report to COPHS	COPHS	1

Jun 09	EU public service review (issue 18)	Stakeholders	1
Oct 09	Newsletter – issue 6	Stakeholders	1
Sep 09	EU parliament magazine (issue 10)	Stakeholders	1
Nov 09	Contribution to DG-SANCO's <i>Review of Community Plant Health Regime</i>	EC DG SANCO	1
Dec 09	Progress report to COPHS	COPHS	1
May 10	Coordinator attending EU Q-Bol project meeting	EU Project (links to EUPHRESCO)	1
May 10	Coordinator attending EU Q-Detect project meeting	EU Project (links to EUPHRESCO)	1
May 10	EUPHRESCO presentation to EU REGPOT project (Athens, Greece)	SE European stakeholders	1
Jun 10	Progress report to COPHS	COPHS	1
Jul 10	Final EUPHRESCO Conference	Policy makers, scientists, stakeholders	1
Jul 10	Final Newsletter – issue 7	Stakeholders	1
Jul 10	Article in <i>International Innovation</i>	Stakeholders	1
Jul 10	Reports from pilot Research projects	Stakeholders	1 & 4
Jul 10	All remaining EUPHRESCO Deliverable reports not already published (DL2.4, 4.1, 4.2, 5.1, 5.2, 5.3)	Stakeholders	1,2,3,4,5

2.3. Publishable results

The major EUPHRESCO publishable results are as follows, though others are also available from the EUPHRESCO website:

WP No.	Item	Type	Weblink
WP1	Articles in the <i>EU Parliament Magazine</i>	Article	http://www.euphresco.org/downloadFile.cfm?id=139 http://www.euphresco.org/downloadFile.cfm?id=446
	Articles in the <i>EU Public Service Review</i>	Article	http://www.euphresco.org/downloadFile.cfm?id=236 http://www.euphresco.org/downloadFile.cfm?id=408
	Article in <i>International Innovation</i> (2010) and included in the EUPHRESCO Final Conference	Article	http://www.euphresco.org/public/publications/index.cfm?id=30&startat=5
	Presentations from the Final EUPHRESCO Dissemination Conference (July 2010)	Presentations	http://www.euphresco.org/public/publications/index.cfm?id=113
	Conclusions from the final EUPHRESCO Conference	Report	http://www.euphresco.org/public/publications/index.cfm?id=112
	Posters of EUPHRESCO-initiated transnational research projects (presented at EUPHRESCO Final Conference, July 2010)	Posters	http://www.euphresco.org/public/publications/index.cfm?id=114
	EUPHRESCO six-monthly newsletters	Newsletters	http://www.euphresco.org/public/publications/index.cfm?id=31
WP2	Mapping and Analysis of	Report	http://www.euphresco.org/downloadFile.cfm?id=227

	National Phytosanitary (Regulated Plant Health) Research Programmes (DL2.2)		
	Common principles guide for the establishment of national phytosanitary research (DL2.4)	Guide	http://www.euphresco.org/public/publications/index.cfm?id=28
WP3	Pilot calls in 2008	Calls	http://www.euphresco.org/public/calls/index.cfm
WP4	Evaluation of instruments and processes used in pilot calls and projects (DL4.1)	Report	http://www.euphresco.org/public/publications/index.cfm?id=28
	Final operations handbook of tools and processes (DL4.2)	Report & toolbox	http://www.euphresco.org/public/publications/index.cfm?id=28 http://www.euphresco.org/public/publications/index.cfm?id=109
	Final research reports from pilot projects (full report or summary)	Report	http://www.euphresco.org/public/publications/index.cfm?id=28
WP5	Common strategic research agenda for plant health (DL5.1)	Report	http://www.euphresco.org/public/publications/index.cfm?id=28
	<i>Modus operandi</i> and structure for a long-term self-sustainable network of phytosanitary research funders (DL5.2)	Report	http://www.euphresco.org/public/publications/index.cfm?id=28