



## Point of view

### EUPHRESCO Project – Safeguarding Europe’s plant health through research coordination

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**EUPHRESCO is a network of European plant health research funders which aims to coordinate national, transnational and EU-funded research in direct support of the Community Plant Health Regime (CPHR). The main achievements and future challenges of the network are presented here.**

#### Introduction

Europe’s agriculture, horticulture, forestry and environment are under constant and ever increasing threats from new and exotic plant pests and diseases. Increased globalisation of trade both in terms of volume and diversity, climate change and EU expansion all exacerbate the risks. While these risks grow, our capacity and capabilities to deal with them shrink. Resources for national plant health inspection services, science programmes and research are decreasing. EUPHRESCO (European Phytosanitary Research Coordination) was established in 2006 to help combat these challenges and mitigate the risks posed by pests and diseases through the coordination of plant health research.

#### History of EUPHRESCO

EUPHRESCO is a network of European plant health research funders which aims to coordinate national, transnational and EU-funded research in direct support of the Community Plant Health Regime (CPHR). The CPHR’s primary goals are to prevent the introduction, establishment and spread of regulated and quarantine plant pests through the provision of EU-wide policy, inspection services and science capability. EUPHRESCO aims to better coordinate the European research that underpins plant health policy and its implementation. It will coordinate the research of national plant health programmes and has advised on plant health priorities for EU-funded work under the 7th Framework Programme. By doing so, EUPHRESCO will optimise research funding, promote cooperation, develop common research agendas and foster scientific expertise to improve Europe’s phytosanitary capability. The resulting research will underpin plant health policy and regulation to prevent or minimise the risks of quarantine plant pests entry and provide the tools needed for surveillance and for the management of these pests if introduced.

EUPHRESCO began as a network of 23 partners in 17 countries, funded by the EU 6<sup>th</sup> Framework Programme (FP6) in 2006 (EUPHRESCO-I). Its partners were leading organisations involved with funding phytosanitary (statutory plant health) research in Europe. Expert advice was provided through formal links to European bodies, the European and Mediterranean Plant Protection Organisation (EPPO), the European Food Safety Authority – Plant Health Panel (EFSA-PHP) and the European Commission’s DG SANCO.

#### 5 projects were commissioned from the virtual common pot call

- DEP – Detection and epidemiology of pospiviroids
- AMBROSIA – Strategies for *Ambrosia* management
- ERWINDECT – Diagnostic tools for the detection of fire blight
- PROPSCAPH – Risk of spread of *Scaphoideus titanus*, vector of GFDP
- PEKID – Phytosanitary efficacy of kiln drying

#### 2 projects were commissioned from the real common pot call

- QAMP – Whole genomic DNA amplification for quarantine pests
- DECLAIM – Management for invasive aquatic macrophytic weeds

#### 4 non-competitive projects were initiated; these involved the validation of diagnostic methods for regulated plant pests or pathogens

- Potato ring rot and brown rot
- Whitefly-transmitted viruses
- Potato cyst nematodes
- Maize bacterial blight

#### A second round of non-competitive projects were initiated in 2009/10

- *Dickeya* ecology and diagnostics
- *Gibberella circinata* diagnostic seed methods
- *Anoplophora* detection and risk management
- Meloidogyne detection and risk management
- Phytoplasma diagnostics (link to COST Action)
- Phylogenetic identification of quarantine bacterial pathogens

Figure 1. EUPHRESCO-I projects



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### Main achievements of EUPHRESKO-I

The project's main achievements up to 2010, were:

- (1) the mapping and analysing of 46 national plant health research programmes (35 from EUPHRESKO countries and 11 from non-partner countries in Europe and the EPPO region) resulting in a report which identifies gaps and opportunities that could be addressed through transnational research coordination and collaboration.
- (2) development of tools and processes for three separate funding mechanisms:
  - real common pot: countries provide funds in a single bank account, the best projects resulting from an open call are funded regardless of the nationality of the eligible researchers involved; there is therefore a trans-national flow of funds,
  - virtual common pot: each country participating in a call pays only for the involvement of its own researchers in projects resulting from an open common call and,
  - non-competitive mechanism: a science/research problem or topic area is divided between research groups organised in a consortium, in different countries according to their expertise; each country pays/provides its own researchers to deliver work to the consortium. There is no trans-national flow of funds; there is no competition (for implementing transnational research);
- (3) testing these mechanisms through the commissioning of 11 transnational pilot projects in a 'learning-by-doing' exercise. The funding committed across the 7 competitively-let projects was €1.5 million, relating to 8–10% of the national annual budgets. The 4 non-competitive projects provided a significant amount of additional funding. A further 6 projects commissioned via the non-competitive mechanism were initiated in late 2009 and early 2010 (Figure 1);

- (4) advising the European Commission on plant health research priorities in its 7<sup>th</sup> Framework Programme under a mandate from the EU Council Working Party of Chief Officers of Plant Health Services (COPHS). EUPHRESKO's advisory role has contributed to key strategic topics being included in FP7 calls and projects emerging on the science of pest risk analysis (PRATIQUE Project), DNA barcoding methods for quarantine pests (QBOL Project) and developing field-based detection tools for use by plant health inspection services (Q-DETECT Project);
- (5) developing a common strategic research agenda. The final achievement to highlight is
- (6) the development a modus operandi for a strong, long-term and self-sustainable EUPHRESKO network.

### EUPHRESKO-II

Since the end of EUPHRESKO-I, the network has continued within a second project funded by the EU 7<sup>th</sup> Framework Programme; it started in January 2011 and will run till March 2014. This aims to continue and enlarge previously successful cooperation and ensure the consortium will continue after 2014 as a self-sustainable long-term network of European phytosanitary research funders. EUPHRESKO-II will 'deepen' cooperation by continued transnational research that optimises limited resources, supports other plant health initiatives and further improvements of processes and tools and reduced barriers to collaboration. The network has enlarged to 31 partners in 22 countries with 14 observers (Figure 2, maps 1 and 2). Further, it has enlarged its sector coverage and now includes forestry health and has increased opportunities for cooperation and collaboration with non-European countries. Ten projects, all commissioned via the non-competitive route were initiated in late 2011 and early 2012. The funding

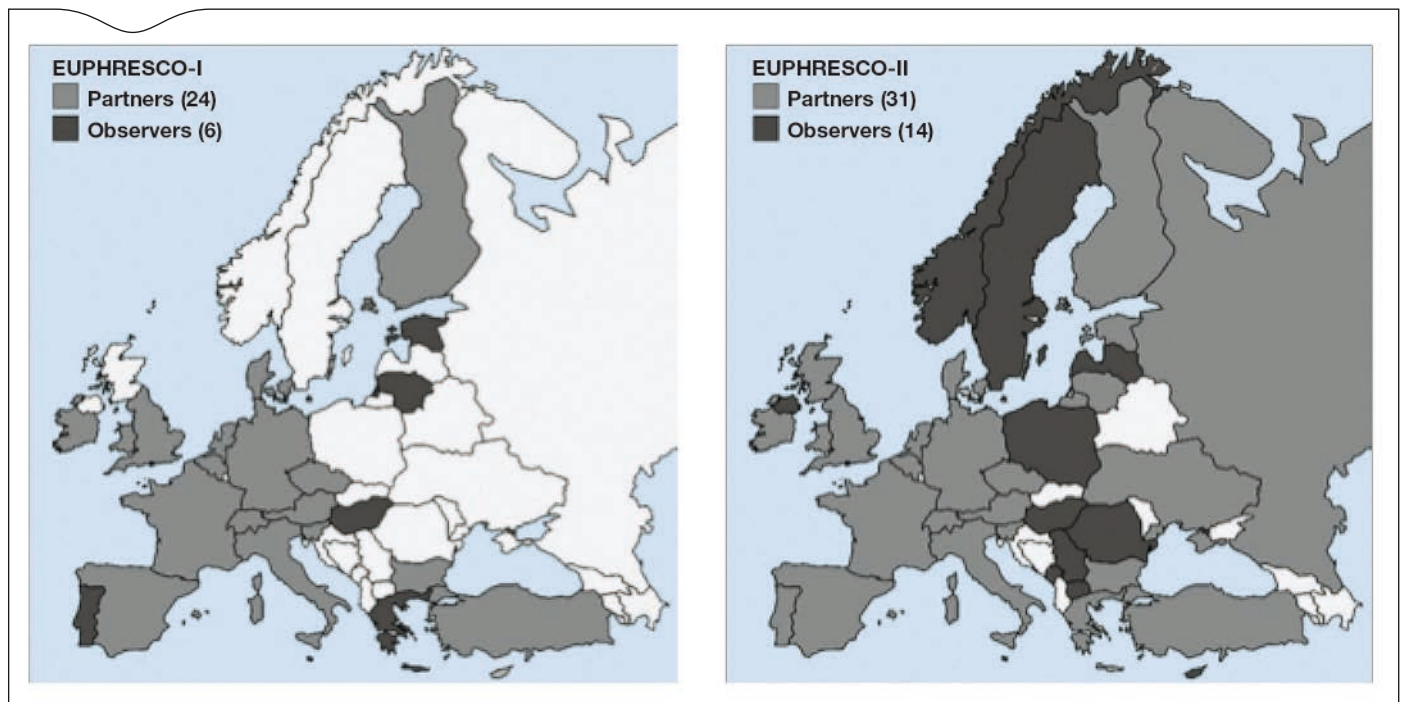


Figure 2. Maps of partners and observers of EUPHRESKO-I (2006-2010) and EUPHRESKO-II (2011-2014).



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committed across these projects was in excess of €2.8 million. The projects covered work on emerging phytophthoras, Potato cyst nematodes, *Meloidogyne enterolobii*, *Synchytrium endobioticum*, pospiviroids, potato phytoplasmas and *Candidatus Liberibacter solanacearum*, Grapevine flavescence dorée, fruit tree phytoplasmoses, fire blight, *Drosophila suzukii*.

### Future: the EPPO role in a sustainable EUPHRESKO network

At the EPPO Council Session in 2011 a request was made by some EPPO member countries that the EPPO Secretariat could provide the structures for a long-term sustainable network of EUPHRESKO. There was unanimous support for this suggestion at the last annual EUPHRESKO meeting in 2012. In particular, it was underlined that one of the core functions listed in Article V of the EPPO Convention is to “facilitate cooperation in research on pests and the methods of control and in the exchange of relevant scientific information”. EUPHRESKO members also considered that EPPO has the technical capacity to manage EUPHRESKO’s research identification and facilitate research coordination, collaboration and cooperation in particular because:

- EPPO has experience in coordination and administration of international groups;
- EPPO has experience in organizing workshops, etc.;
- EPPO’s Information Technology expertise and infrastructure;
- EPPO has links to Regional Plant Protection Organizations in other parts of the world, which could be helpful in extending the network;
- EPPO combines many members with a broader scope than the original EUPHRESKO;
- EPPO members are national plant protection organizations with a good background in plant health issues;
- EPPO and its members are important stakeholders of plant health;
- for some EUPHRESKO members it could be easier to give fees (e.g. membership fees for the network) to an international organization such as EPPO rather than to a national organization from another country;
- it could provide the opportunity to include new partners in EUPHRESKO.

Consequently the possibility that the EPPO Secretariat could provide the structures for a long-term sustainable network of EUPHRESKO is currently under evaluation in particular regarding the possible financing mechanisms to fund the coordinator position which will be needed in the secretariat. Given the broad support of EPPO members to this request and the interest expressed from the European Commission that this ERA-Net should continue, it is hoped that a positive decision will be made at the next EPPO Council session in September 2013.

It is beyond doubt that the EUPHRESKO network cultivates the optimum environment for concerted research efforts, as it provides a coordinated and cohesive framework within which the science needed by policy makers and inspection services can be developed in this vital field.