

## 1. Content of the 'Topic Description' document

### 1.1. Topic area

D: Mapping, modelling

### 1.2. Links to the Euphresco Strategic Research Agenda

The topic addresses the following objective(s) of the 2017-2022 Euphresco Strategic Research Agenda:

- Objective 2017-C-2.1: to address plant health challenges through whole-chain, multi-actor approaches
- Objective 2017-I-2.4: to use information technology in pest/pathogen surveillance programmes

### 1.3. Topic title

Systems for awareness, early detection and notification of organisms harmful to plants.

### 1.4. Description of the problem the research should solve

The introduction and spread of harmful organisms has important economic and ecological consequences. Therefore, it is essential that these plant related quarantine pests and diseases or their symptoms are quickly detected and reported. Firstly, it is important that not only professionals, but also nature lovers and civilians are made aware in an informative way of the chances and risks of the occurrence of invasive exotic species in EU-countries and beyond, without scaremongering. Secondly, it is necessary to ensure a smooth and clear reporting of findings, supported by a system of validation by experts in the event that a potential quarantine organism is reported.

As well-functioning observation and reporting systems already exist, as much information as possible will be retrieved from these systems, e.g., working methods, organisms considered, target groups, means of communication... This will be done for systems for and by different target groups in EU and non-EU countries (professionals in agriculture, horticulture and forestry, citizens ('citizen science'), scientists, ...). In second instance, the project will explore how useful information about current threats can be disseminated through these channels. To this end, all essential information on a number of current threats will be collected and translated into simple, clear and practically useful information sheets. The focus will be on quarantine organisms that are relatively easy to identify (i.e., insects) or those with damage symptoms (fungi, viruses, nematodes, bacteria, phytoplasmas) that can clearly be distinguished. These sheets will serve to raise awareness of the problem and help to detect and identify the organisms. In order to reach the largest possible target group, teaching materials and courses will be prepared and distributed online; several study days will also be organised. In a third part, we will look at how well-known observation (from nature) websites (e.g. observation.org) can serve as a tool to collect reports of harmful organisms. This will be studied for observations by private individuals as well as for those from professional warning systems. For this purpose, a system with expert notification verification will be set up in such a way that observations can easily be reported and sorted according to relevance. Moreover, locations with indications of new risks can be followed up by the competent authorities.

The project will be divided into four work packages:

- WP1. Analysis of existing systems for monitoring damage agents, including their infrastructure
- WP2. Development of one or more web platform(s) for awareness, early warning and reporting of Q-organisms harmful to plants (based on a completely new or on an existing system)
- WP3. Bundling of essential information on the main quarantine organisms

- WP4. Raising public awareness

### 1.5. Description of the expected results

- Make an inventory of the existing systems for raising awareness to identify, monitor and report plant pests and diseases or symptoms among professional and non-professional target groups in Europe and beyond.
- Draw up a list of target organisms, being quarantine organisms that are relatively easy to detect (i.e., insects) or those whose damage symptoms are very typical and easy to identify (e.g., mites, nematodes, fungi, bacteria/phytoplasmas, viruses/viroids...).
- Launch a well-developed, user-friendly and widely known web platform for awareness-raising, warning, rapid detection and reporting of a number of organisms harmful to plants that currently pose a major threat, due to a high risk of introduction and establishment in a number of important crops, forests or public green spaces in EU and non-EU countries.

### 1.6. Beneficiaries of this research product

- Offer the government a handy and transparent tool to be quickly informed about relevant observations and indications of new risks; this enables them to take policy actions if necessary.
- Make the general public and professionals aware of the "quarantine problem" and provide them with sufficient, clear and practical information to enable them to recognize and report quarantine organisms harmful to plants.
- Increase the likelihood of a rapid detection/notification of quarantine organisms harmful to plants, so that action can be taken in good time before the organism establishes and before eradication has serious financial consequences for the grower/sector/authority.
- The awareness-raising system will assist professionals (research institutes, growers, environmental officials) in the rapid detection of these target organisms on their premises/in public green spaces and provide them with information to timely intervene and to prevent potential spread.

### 1.7. Research funders and research contribution/ distribution

Funding organisation	Research activity and researchers involved
1. Flanders Research Institute for agriculture, fisheries and food, Belgium  Kris De Jonghe <a href="mailto:kris.dejonghe@ilvo.vlaanderen.be">kris.dejonghe@ilvo.vlaanderen.be</a>	-Project coordination; -Analysis of existing monitoring /reporting systems; -Development of Belgian web platform; -Preparing info sheets on a selection of quarantine organisms; -Raising public awareness;  Contact person: Jochem Bonte E-mail: <a href="mailto:jochem.bonte@ilvo.vlaanderen.be">jochem.bonte@ilvo.vlaanderen.be</a>
2. Federal Ministry for Sustainability and Tourism, Austria  Sylvia Bluemel <a href="mailto:sylvia.bluemel@ages.at">sylvia.bluemel@ages.at</a>	-Analysis and comparison of existing monitoring and reporting systems targeted at harmful quarantine and non-quarantine pests and diseases (IPP) of woody plants; -Establishing and testing a system involving citizen-science and monitoring by volunteers enabling early detection of IPP;



	<p>-Raising public awareness by printed media (information sheets) and online diagnostic and information systems as well as cost free diagnostic and advisory service events for the public;</p> <p>Contact person: Thomas L. Cech E-mail: <a href="mailto:thomas.cech@bfw.gv.at">thomas.cech@bfw.gv.at</a></p>
<p>3. Ministry of Agriculture, Rural Development and Environment, Cyprus</p> <p>Tefkros Iacovides <a href="mailto:amelifronidou@da.moa.gov.cy">amelifronidou@da.moa.gov.cy</a></p>	<p>-Analysis of existing monitoring/ reporting systems; -Preparing programme for surveys; -Preparing survey manuals for inspectors; -Preparing Action Plans and raising public awareness;</p> <p>Contact person: Anthemis Melifronidou-Pantelidou E-mail: <a href="mailto:amelifronidou@da.moa.gov.cy">amelifronidou@da.moa.gov.cy</a></p> <p>Contact person: Kypros Hadjiafxentis E-mail: <a href="mailto:khadjiafxentis@da.moa.gov.cy">khadjiafxentis@da.moa.gov.cy</a></p> <p>Contact person: Despina Koukkoularidou E-mail: <a href="mailto:dkoukkoularidou@da.moa.gov.cy">dkoukkoularidou@da.moa.gov.cy</a></p>
<p>4. Federal Ministry of Food and Agriculture, Germany</p> <p>Silke Steinmüller <a href="mailto:silke.steinmoeller@julius-kuehn.de">silke.steinmoeller@julius-kuehn.de</a></p>	<p>-Analysis of existing monitoring and reporting systems in Germany; -Gathering of new ideas for public awareness rising; -Development of new data sheets used for public awareness rising;</p> <p>Contact person: Silke Steinmüller E-mail: <a href="mailto:Silke.steinmoeller@julius-kuehn.de">Silke.steinmoeller@julius-kuehn.de</a></p>
<p>5. Ministry of Rural Development and Food, Greece</p> <p>Athanasios Lagkouranis <a href="mailto:alagkouranis@minagric.gr">alagkouranis@minagric.gr</a></p>	<p>-Analysis of existing monitoring and reporting systems in Greece targeting Union Quarantine pests and Priority pests; -Analysis of existing early detection systems and approaches promoting online diagnostic and advisory services (for the stakeholders, the public included) specially for the pests easy to detect; -Designing the key elements of an electronic tool for rapid detection; -Preparing and gathering electronic info sheets;</p> <p>Contact person: Athanasios Lagkouranis E-mail: <a href="mailto:alagkouranis@minagric.gr">alagkouranis@minagric.gr</a></p>
<p>6. Ministry of agricultural food and forestry policies, Italy</p> <p>Alberto Masci <a href="mailto:a.masci@mpaaf.gov.it">a.masci@mpaaf.gov.it</a></p>	<p>-Analysis of existing monitoring/reporting systems in Italy; -Preparing info sheets on a selection of quarantine organisms harmful to plants; -Raising public awareness;</p>



	<p>Contact person: Francesco Faggioli E-mail: <a href="mailto:francesco.faggioli@crea.gov.it">francesco.faggioli@crea.gov.it</a></p> <p>Contact person: Luca Riccioni E-mail: <a href="mailto:luca.riccioni@crea.gov.it">luca.riccioni@crea.gov.it</a></p>
<p>7. International Center for Advanced Mediterranean Agronomic Studies Italy</p> <p>Anna Maria D'Onghia <a href="mailto:donghia@iamb.it">donghia@iamb.it</a></p>	<p>-Analysis and comparison of existing monitoring/reporting systems in Italy and in the Mediterranean region; -Preparing info sheets on a selection of quarantine organisms harmful to plants; -Raising public awareness;</p> <p>Contact person: Stefania Gualano E-mail: <a href="mailto:gualano@iamb.it">gualano@iamb.it</a></p>
<p>8. Netherlands Food and Consumer Products Safety Authority, Netherlands</p> <p>Martijn Schenk <a href="mailto:M.Schenk1@nvwa.nl">M.Schenk1@nvwa.nl</a></p>	<p>-Analysis of existing monitoring and reporting systems in the Netherlands</p> <p>Contact person: Martijn Schenk E-mail: <a href="mailto:m.schenk1@nvwa.nl">m.schenk1@nvwa.nl</a></p>
<p>9. Ministry of Agriculture, Plant Protection Service, Slovakia</p> <p>Katarina Benovska <a href="mailto:katarina.benovska@land.gov.sk">katarina.benovska@land.gov.sk</a></p>	<p>-Analysis of existing monitoring/reporting systems in Slovakian forests; -Development (improvement) of Slovakian web platform for monitoring of quarantine species; -Preparing information materials about quarantine species on forest trees; -Raising public awareness;</p> <p>Contact person: Andrej Gubka E-mail: <a href="mailto:andrej.gubka@nlcsk.org">andrej.gubka@nlcsk.org</a></p> <p>Contact person: Andrej Kunca E-mail: <a href="mailto:kunca@nlcsk.org">kunca@nlcsk.org</a></p>
<p>10. National Institute For Agricultural Research And Food Technology, Spain</p> <p>Elena Rodriguez <a href="mailto:rodriguez.elena@inia.es">rodriguez.elena@inia.es</a></p>	<p>-Analysis of existing monitoring/reporting systems in Spain; -Preparing info sheets on a selection of quarantine organisms harmful to plants in Spain; -Raising public awareness;</p> <p>Contact person: Juan A. Navas-Cortés E-mail: <a href="mailto:j.navas@csic.es">j.navas@csic.es</a></p>
<p>11. Forestry Commission, United Kingdom United Kingdom</p> <p>Joan Webber <a href="mailto:joan.webber@forestresearch.gov.uk">joan.webber@forestresearch.gov.uk</a></p>	<p>-Analysis of existing monitoring/ reporting systems in Britain; -Preparing info sheets on a selection of quarantine organisms; -Raising public awareness;</p> <p>Contact person: Ana Perez-Sierra E-mail: <a href="mailto:ana.perez-sierra@forestresearch.gov.uk">ana.perez-sierra@forestresearch.gov.uk</a></p>



<p>12. Bahamas Agricultural Health &amp; Food Safety Authority, Bahamas</p> <p>Yasmin Johnson  <a href="mailto:yasminjohnson@bahamas.gov.bs">yasminjohnson@bahamas.gov.bs</a></p>	<p>Improving technical capacity (training) as it relates to the identification, early detection and mitigation of quarantine pests.  Raising public awareness (printed media and informational sessions)  Developing surveillance and early detection systems  Developing a database that includes or confirms the presence of plant pests/diseases that are present in country. This is particularly important as it relates to trade  Procuring assistance with the creation of a national pest/regulated pest list  Improving plant quarantine system  Improving the diagnostic capacity</p> <p>Contact person: Yasmin Johnson  E-mail: <a href="mailto:yasminjohnson@bahamas.gov.bs">yasminjohnson@bahamas.gov.bs</a></p>
<p>13. Private consultant, Ireland</p> <p>Gerry Douglas  <a href="mailto:douglastree87@gmail.com">douglastree87@gmail.com</a></p>	<p>-Contribution to be detailed</p> <p>Contact person: Gerry Douglas  E-mail: <a href="mailto:douglastree87@gmail.com">douglastree87@gmail.com</a></p>
<p>14. Ministry of Industry, Commerce, Agriculture and Fisheries, Jamaica</p> <p>Sanniel Wilson  <a href="mailto:sswilson@micaf.gov.jm">sswilson@micaf.gov.jm</a>  <a href="mailto:PQsecretary@micaf.gov.jm">PQsecretary@micaf.gov.jm</a></p>	<p>-Raise public awareness by printed media (data sheets);  -Knowledge and keen interest in early detection systems and monitoring;</p> <p>Contact person: Sanniel Wilson  E-mail: <a href="mailto:sswilson@micaf.gov.jm">sswilson@micaf.gov.jm</a></p>
<p>15. University of Novi Sad, Serbia</p> <p>Aleksandra Konjevic  <a href="mailto:aleksandra.konjevic@polj.uns.ac.rs">aleksandra.konjevic@polj.uns.ac.rs</a></p>	<p>-Contribution to be detailed;</p> <p>Contact person: Aleksandra Konjevic  E-mail: <a href="mailto:aleksandra.konjevic@polj.uns.ac.rs">aleksandra.konjevic@polj.uns.ac.rs</a></p>
<p>16. Department of Agriculture, Environment and Rural Affairs, United Kingdom</p> <p>Aoife Smith  <a href="mailto:Aoife.Smith@daera-ni.gov.uk">Aoife.Smith@daera-ni.gov.uk</a></p>	<p>-Contribution to be detailed;</p> <p>Contact person: Aoife Smith  E-mail: <a href="mailto:Aoife.Smith@daera-ni.gov.uk">Aoife.Smith@daera-ni.gov.uk</a></p>
<p>17. John Innes Center, United Kingdom</p> <p>Diane Saunders  <a href="mailto:Diane.Saunders@jic.ac.uk">Diane.Saunders@jic.ac.uk</a></p>	<p>-Contribution to be detailed;</p> <p>Contact person: Diane Saunders  E-mail: <a href="mailto:Diane.Saunders@jic.ac.uk">Diane.Saunders@jic.ac.uk</a></p>

### 1.8. Research project partnership outside Euphresco

Euphresco funding ensures a certain level of transnational collaboration among Euphresco member countries. It is possible, if the funding consortium is interested, to contact funding organisations or research groups outside the geographical area covered by Euphresco members. The Euphresco coordinator could advertise the research topic in order to have an enlarged collaboration. If funders are interested in this possibility, please check the case below:

The funding consortium of the topic mentioned in section 1.2 requires that the topic is advertised outside the Euphresco network

### **1.9. Any other relevant information on content**

EFSA have started a procedure to initiate an internal project on “Evidence for syndromic surveillance and early detection: indicators for better surveillance of animal and plant health. They will have the results of this internal prioritisation by November 2019 and if positive they could join the Euphresco consortium focusing on the aspects of whether and how such citizen science data can be integrated/used in risk/statistics-based surveillance including data requirements. Contact points: Sybren Vos [Sybren.VOS@efsa.europa.eu](mailto:Sybren.VOS@efsa.europa.eu) and José Cortinas Abrahantes [Jose.CORTINASABRAHANTES@efsa.europa.eu](mailto:Jose.CORTINASABRAHANTES@efsa.europa.eu)

## 2. Euphresco management aspects of the project

### 2.1. Indication of the topic budget

Funding organisation <sup>a</sup>	Mechanism <sup>b</sup>	Total Budget <sup>c</sup>
1. ILVO (BE)	NC	€
2. BMNT (AT)	NC	€
3. MoA (CY)	NC	€
4. BMEL (DE)	NC	€
5. MINAGRIC (GR)	NC	€
6. Mipaaf (IT)	NC	€
7. CIHEAM (IT)	NC	€
8. NVWA (NL)	NC	€
9. NLC (SK)	NC	€
10. INIA (ES)	NC	€
11. FC (GB)	NC	€
12. BAHFSA (BS)	NC	€
13. Private Consultant (IE)	NC	€
14. Micaf (JM)	NC	€
15. UNS (RS)	NC	€
16. DAERA (GB)	NC	€
17. JIC (GB)	NC	€
total		€

### 2.2. Expected duration of the project

24 months.

### 2.3. Identification of project coordinator

Has the research project coordinator been identified?

Yes

No

### 2.4. Any other relevant information on topic organisation and management

None.

<sup>a</sup> First member is project coordinator. A minimum of two partners are necessary for each proposal. Add lines as needed.

<sup>b</sup> Please indicate the preferred mechanism (e.g. real pot RP; virtual pot VP; non-competitive NC), or several mechanisms if there is flexibility.

<sup>c</sup>Optional, as this amount can still change in the next phase. In-kind contribution should also be indicated in this column.