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

### 1.1. Topic area

Pest/Vector biology, epidemiology, taxonomy.

### 1.2. Topic title

Spatial distribution of *Anoplophora glabripennis* under various environmental conditions.

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

The Asian long-horned beetle (ALB) is an invasive wood-boring insect, native to China and the Korean Peninsula which causes severe damages to endemic tree species in Northern America and Europe. It is listed at the Annex I of the European Council Decision 2000/29/EG and hence considered as a Quarantine pest whose entry and spread within the EU ought to be avoided. Since its entry into the US and Europe in the mid-90s and early 2000s, respectively, valuable information on its biology and damaging potential has been gathered. However, we are still lacking substantial data on its flight characteristics and its potential of large-scale dispersal.

With this study, we intend to better understand the mechanisms of local distributions of invasive Cerambycids, as reflected by the ALB. By using e.g. geo-informatic data of beetle species occurrences in host trees within one local area, we want to better understand, whether these distributions are random or determined by environmental/ climatic conditions. Spatial point pattern analysis could serve as one statistical tool to address our hypotheses.

### 1.4. Description of the expected results

The results should help modelling and strengthen the prediction on pest spread in outbreak situations and thereby enable more effective and tailor-made measures, such as monitoring.

### 1.5. Beneficiaries of this research product

NPPOs and RPPOs with direct associations and/or responsibilities for eradication and monitoring measures should benefit from predictions of beetle spread/distribution at local scales (within outbreak areas).

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

| Funding organisation | Research activity and researchers involved |
|---|---|
| 1. Bundesministerium für Ernährung und Landwirtschaft, Germany<br><br>Bettina Beerbaum<br>Bettina.beerbaum@bmel.bund.de<br><br>Silke Steinmöller<br>Silke.steinmoeller@julius-kuehn.de | - Project coordination.<br>- Organisation of one workshop.<br>- Data collections from Member states with outbreaks.<br>- Acquisition of collaborators with sophisticated expertise in ecological modelling.<br><br>Contact person: Björn Hoppe<br>E.mail address: bjoern.hoppe@julius-kuehn.de |
| 2. Austrian Research Centre for Forests, Austria<br><br>Gernot Hoch<br>gernot.hoch@bfw.gv.at | -Collect and provide data from ALB outbreak sites in Austria.<br><br>Contact person: Gernot Hoch<br>E.mail address:  gernot.hoch@bfw.gv.at |

| | Contact person: Ute Hoyer-Tomiczek<br>E.mail address: ute.hoyer@bfw.gv.at |
|---|---|
| 3. Institute for Agricultural and Fisheries Research, Belgium<br><br>Martine Maes<br>Martine.maes@ilvo.vlaanderen.be | -Modelling of potential ALB outbreak in Belgium<br><br>Contact person: Jochem Bonte<br>E.mail address:<br>Jochem.Bonte@ilvo.vlaanderen.be |
| 4. Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland<br><br>Dr. Doris Hölling<br>doris.hoelling@wsl.ch | -Data collection from outbreaks in Switzerland.<br>-Invasion genetics of Asian longhorned beetle *Anoplophora glabripennis* (ALB) in Switzerland.<br><br>Contact person: Doris Hölling<br>E.mail address: doris.hoelling@wsl.ch<br><br>Contact person: Simone Prospero |

### 1.7. 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 to advertise the topic outside the Euphresco network

Information to sharpen the profile of sought partners could be useful (but not mandatory): country/region (if there are preferences), skills/expertise required, etc.

### 1.8. Any other relevant information on content

Work related to this topic was already funded under Anoplorisk I and II and therefore duplication should be avoided; close collaboration with other projects in the field is envisioned. The topic will be advertised to involve members outside of the Euphresco network. Interest from non-Euphresco members has already been identified.

## 2. *Euphresco management aspects of the project*

### 2.1. Indication of the topic budget

| Funding organisation [a] | Mechanism [b] | Total Budget [c] |
|---|---|---|
| 1. BMEL (DE) | NC | € 15 000 |
| 2. BFW (AT) | NC | € 3 000 |
| 3. ILVO (BE) | NC | € 2 000 |
| 4. WSL (CH) | NC | € tbc |
| total | | € |

### 2.2. Expected duration of the project (only for non-competitive topics)

12-24 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

[a] First member is project coordinator. A minimum of two partners are necessary for each proposal. Add lines as needed.
[b] Please indicate the preferred mechanism (e.g. real pot RP; virtual pot VP; non-competitive NC), or several mechanisms if there is flexibility.
[c] Optional, as this amount can still change in the next phase. In-kind contribution should also be indicated in this column.