

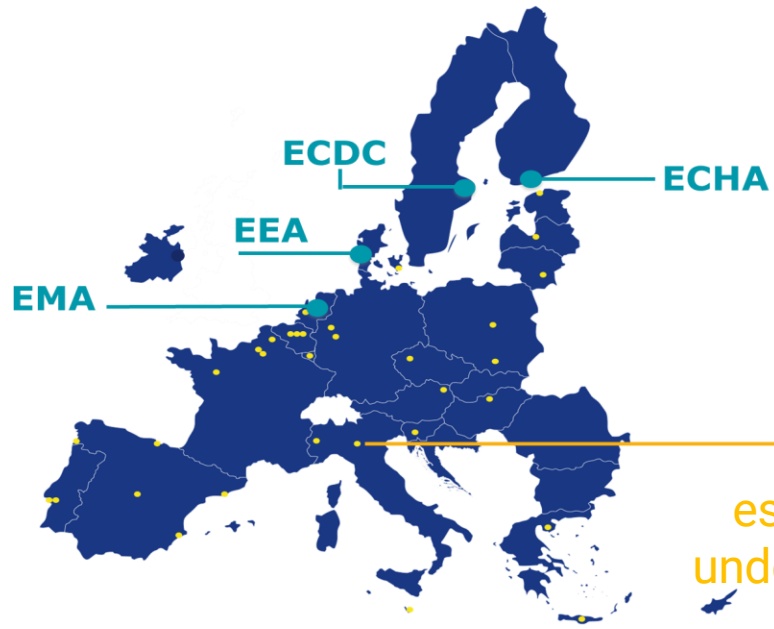


# PEST REPORTING, SURVEILLANCE AND MONITORING

Sybren Vos

Team Leader Plant Health Monitoring

PLANTS Unit – Ecotoxicology, Plants and Environment



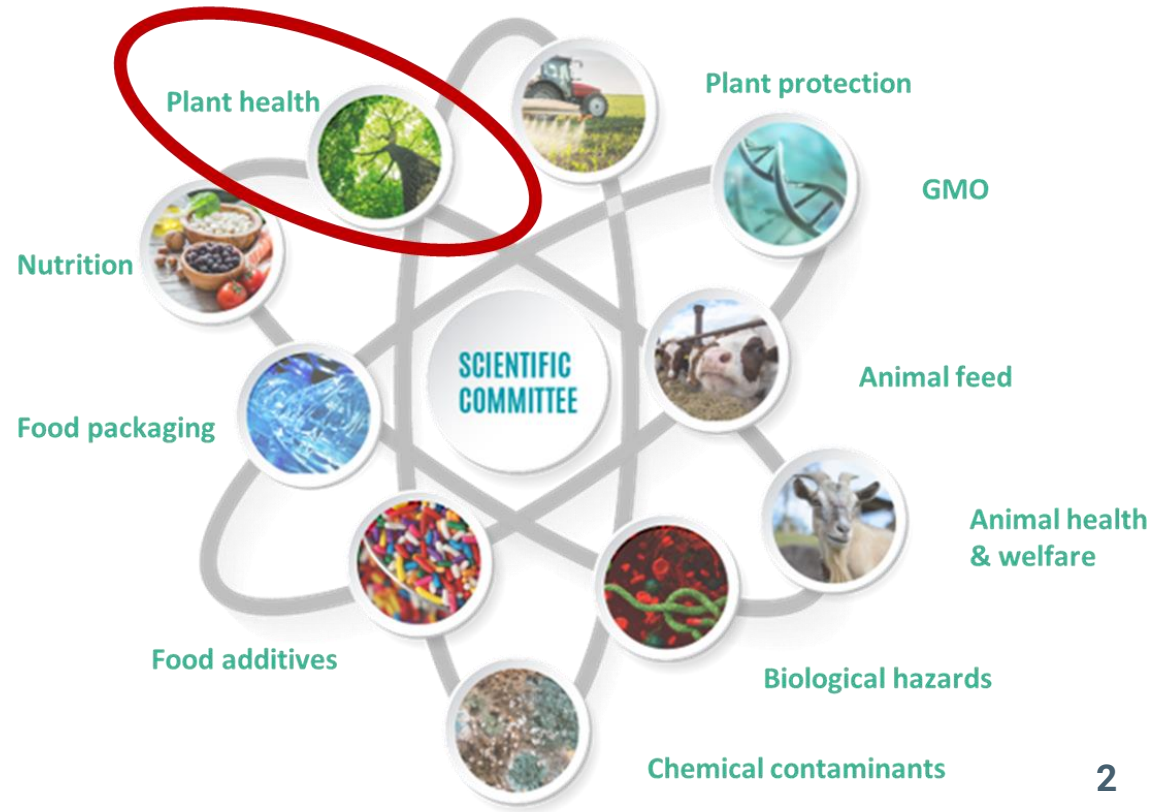
By Dr. Art Davis - [http://www.aphis.usda.gov/lpa/issues/bse/bse\\_photogallery.html](http://www.aphis.usda.gov/lpa/issues/bse/bse_photogallery.html), Public Domain, <https://commons.wikimedia.org/w/index.php?curid=68314246>



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The reference body for risk assessment of food and feed in the European Union. Its work covers the entire food chain – from field to fork



# OUTLINE



From Early warning to early detection

EFSA Horizon scanning

EFSA Pest survey toolkit

Conclusion



# PLH LEGISLATIVE FRAMEWORK

## AIMS

- Protect agriculture and environment (prevent phytosanitary crisis)
- Reassure trade partners
- Equal treatment (avoid trade distortions)

## ISPM STANDARDS



### ISPM 6 – Surveillance.

ISPM 31 - Methodologies for sampling of consignments

ISPM 4 - Requirements for the establishment of pest free areas

ISPM 8- Determination of pest status in an area

ISPM 27- Diagnostic protocols



## PREVENTION and CRISIS PREPAREDNESS

List of quarantine pests  
List of priority pests  
Emergency measures  
Etc.

Official services NPPOs

- Implementation
- Communication

EFSA

Independent Scientific advice on Plant health monitoring and on Risk assessment

# Plant health monitoring and Risk assessment

Support to PREPARATION

Early  
warning

Horizon  
scanning



# Plant health monitoring and Risk assessment

Support to PREPARATION



**Early warning**

Horizon scanning

**Risk assessment**

Pest RA  
Commodity RA  
Environment RA

**Prioritisation**

Pest ranking



# Plant health monitoring and Risk assessment

Support to PREPARATION

Support to IMPLEMENTATION



Early warning

Horizon scanning

Risk assessment

Pest RA  
Commodity RA  
Environment RA

Prioritisation

Pest ranking

Early detection

Pest survey toolkit



# PEST REPORTING

## ISPM 17 Main purpose:

**Communicate immediate or potential danger** of a quarantine pest

Event

- occurrence
- outbreak
- spread

- in the country in which it is detected
- neighbouring countries
- countries that are traded with



# PEST REPORTING

## ISPM 17 Main purpose:

Communicate **immediate** or **potential danger** of a quarantine pest

- occurrence
- outbreak
- spread

- in the country in which it is detected
- neighbouring countries
- countries that are traded with

**Early warning**

**Early detection**

**Horizon scanning**

**Pest survey toolkit**

**Risk assessment**

# EARLY WARNING: EFSA HORIZON SCANNING

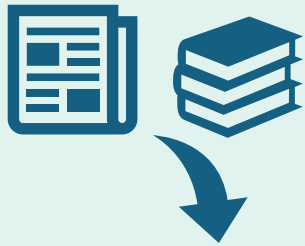
## Monthly newsletter



# EARLY WARNING: EFSA HORIZON SCANNING

## Online MEDIA & LIT Scanning

Plant health threats



Media and scientific literature monitoring



Articles screening and selection



## Monthly newsletter



> 13,000 keywords

> 3,200 sources  
(1,706 scientific journals)

**Worldwide**  
**Large N° languages**

# EARLY WARNING: EFSA HORIZON SCANNING

## Online MEDIA & LIT Scanning

Online information about plant health threats



Media and scientific literature monitoring



Articles screening and selection



## Monthly newsletter

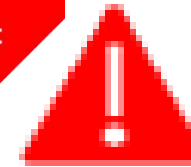


## PEMO SCORING

Ranking of pests and comparison with a reference threshold



PeMo  
positive



Scoring

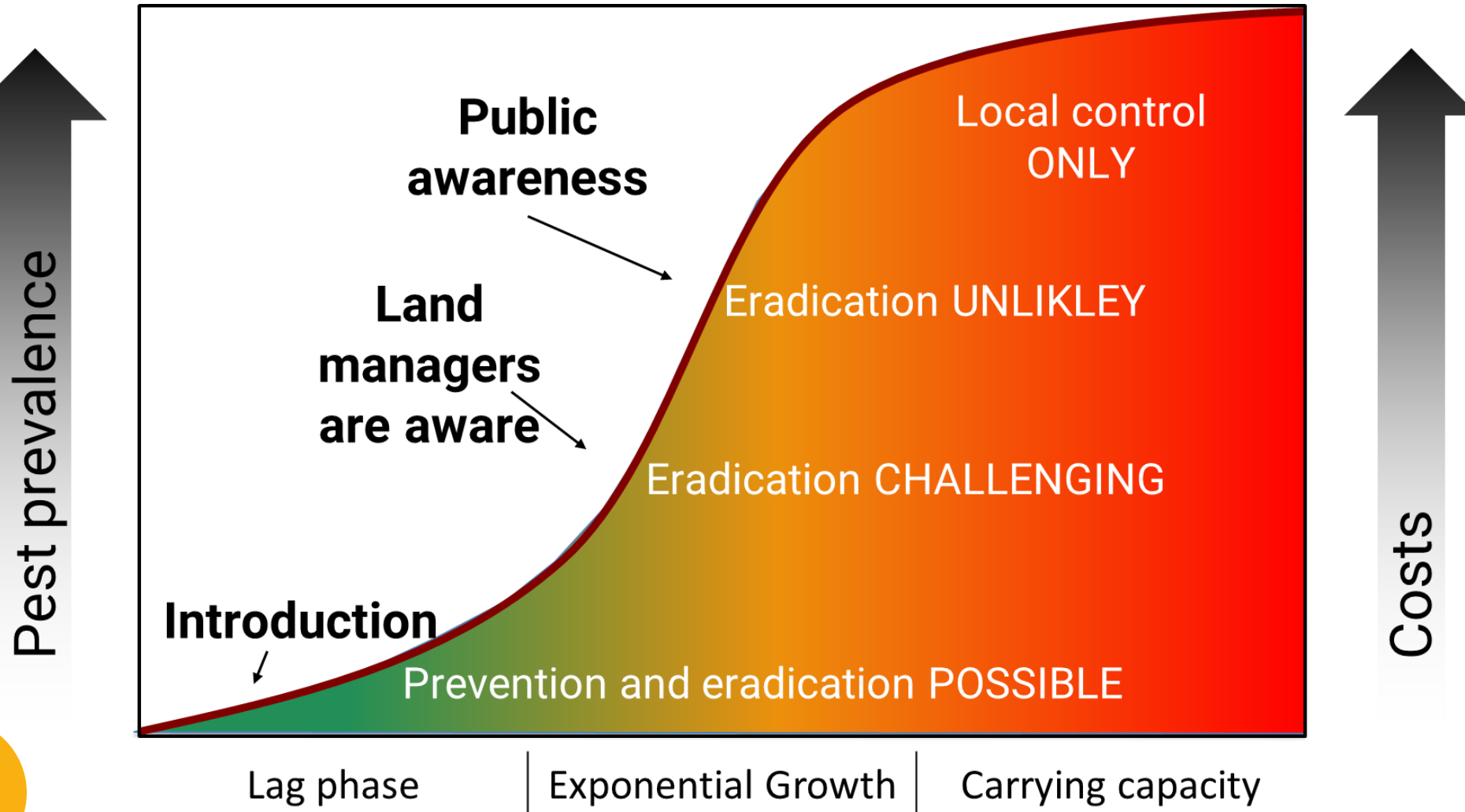
PeMo  
negative



### 15 criteria

Pathways
Presence of the pest
Climate suitability
Host plants & area covered in EU
Natural spread
Human assisted spread
Need of vectors
Yield losses
Plant death
Visual detection
Pest control

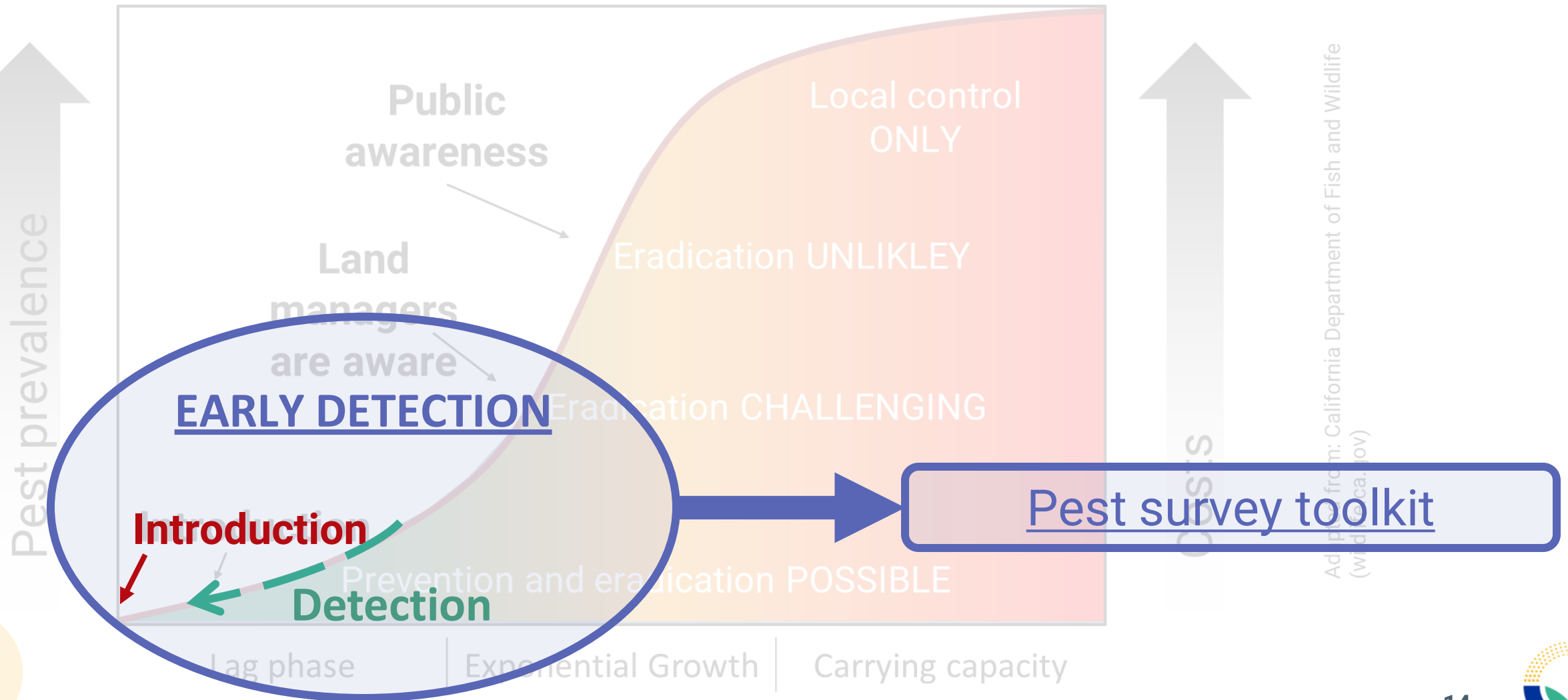
# EARLY DETECTION: BIOLOGICAL INVASION



Adapted from: California Department of Fish and Wildlife  
(wildlife.ca.gov)



# EARLY DETECTION: CRISIS PREPAREDNESS



Adapted from: California Department of Fish and Wildlife (wildlife.ca.gov)



# EARLY DETECTION: METHODOLOGICAL FRAMEWORK



Impossible to inspect all  
host plant of an area

We need a sample → Statistics are needed



**Toolkit BASED ON SCIENCE**



# EARLY DETECTION: METHODOLOGICAL FRAMEWORK

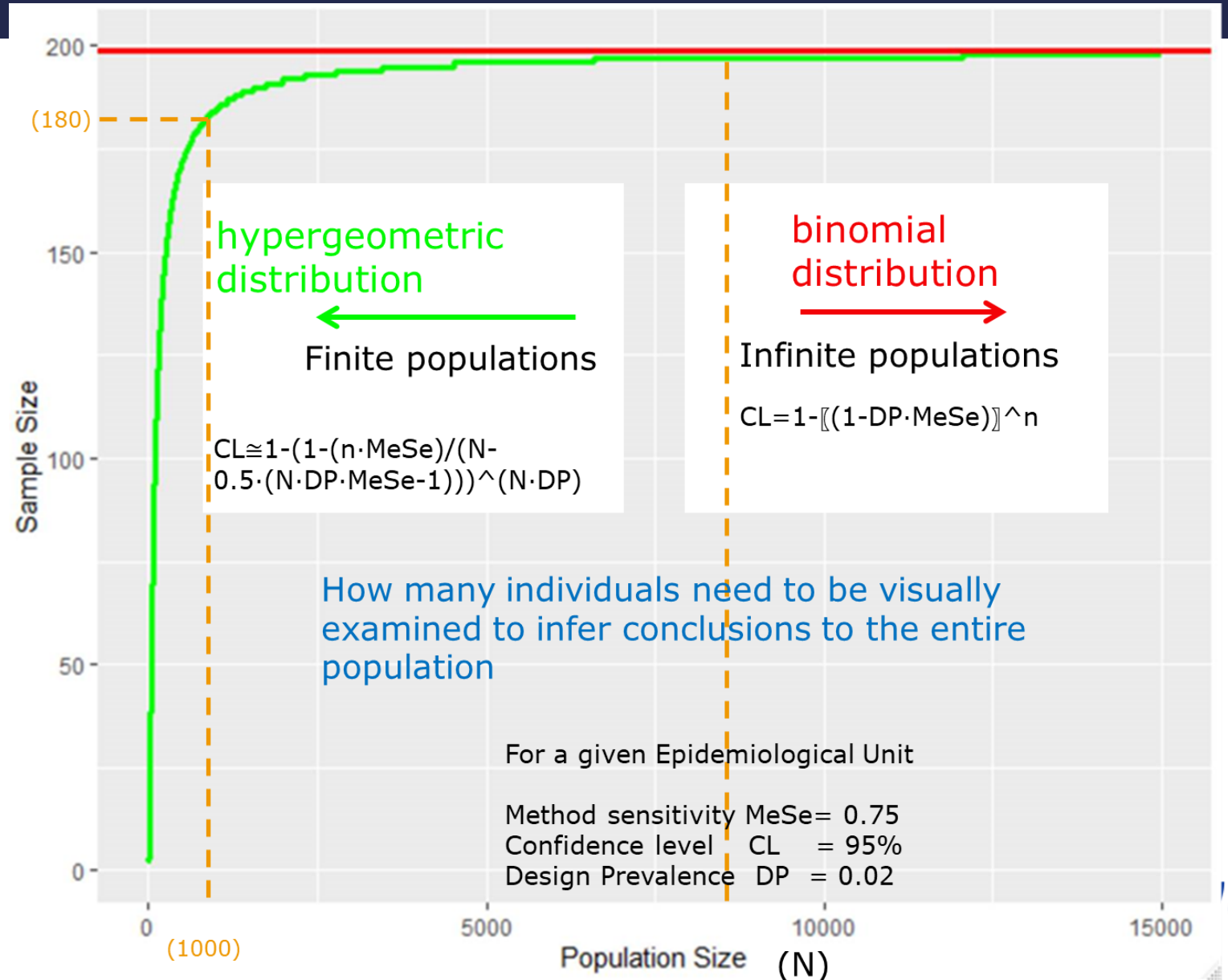
Impossible to inspect all host plant of an area



We need a sample  
Statistics are needed



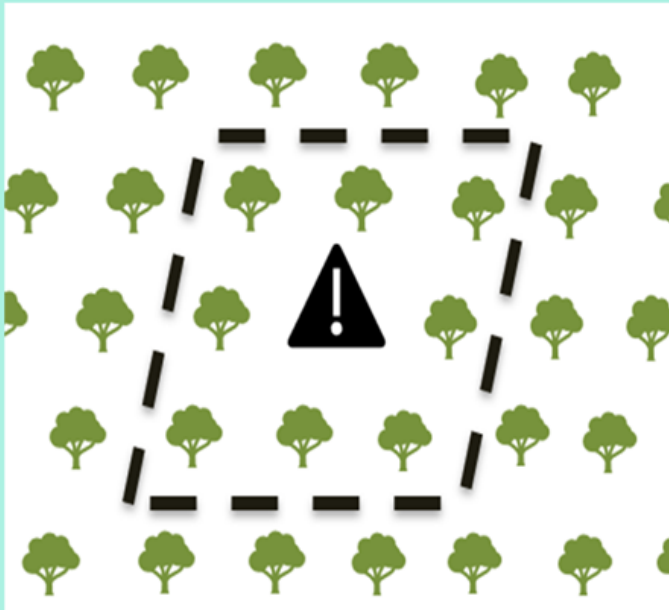
**Toolkit BASED ON SCIENCE**





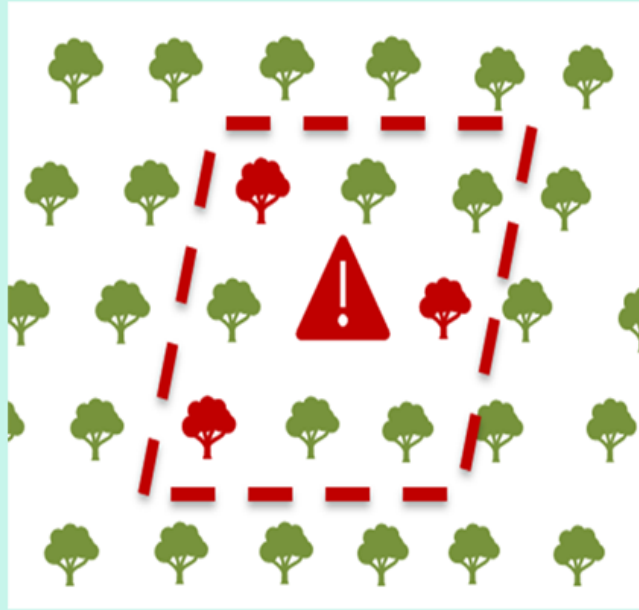
# EARLY DETECTION: PEST FREEDOM SURVEYS

## Detection Surveys



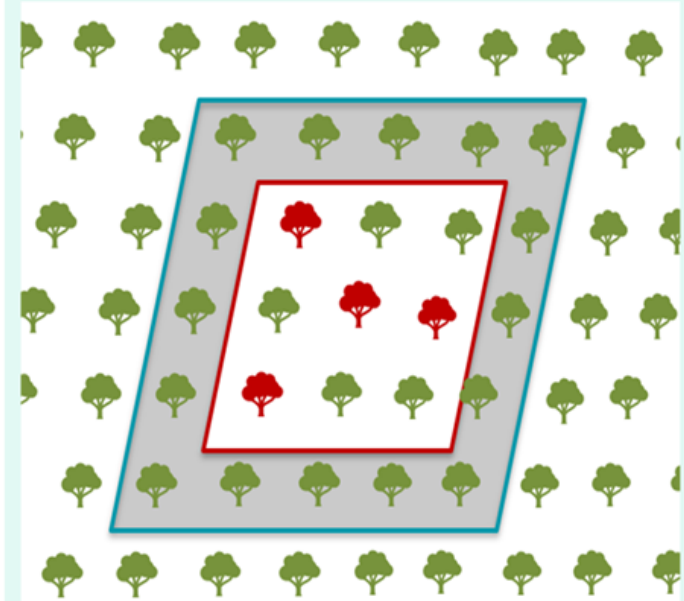
*Is the pest present?  
(pest freedom)*

## Delimiting Surveys



*We know it is present!  
How far has it spread?*

## Buffer zone surveys



*Has it spread further?*



# TOOLKIT

IMPLEMENT

## Prepare



EFSA Pest Survey Cards



Database for PP

## Design and Optimize



RiPEST



OptiPest

## CONCLUDE

Robust surveys

Harmonised in time and space

Pest status:  
From trust to evidence

# CONCLUSION



## ➤ Crisis preparedness:

Risk assessments

Early Warning – Horizon scanning

Early Detection – EFSA pest survey toolkit

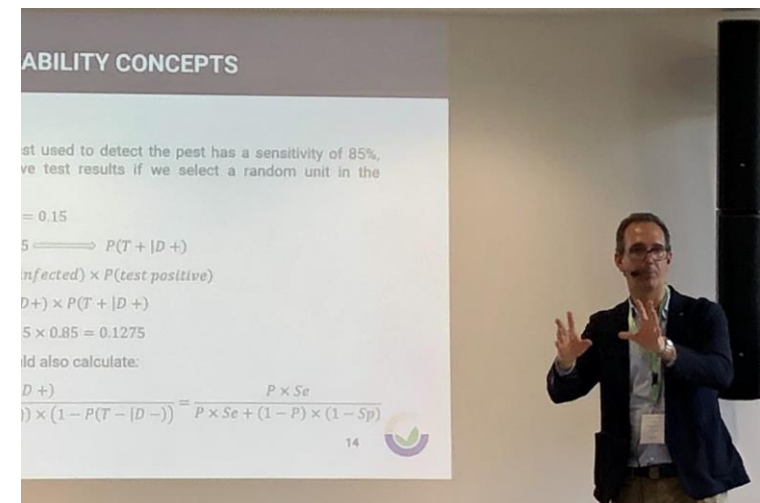


## ➤ Capacity building

- Training of trainers: BTSF programme  
EFSA Network on Pest Surveillance

- E-learning course in 10 modules for using  
the toolkit

- Webinars for all EU priority pests



THANK YOU FROM EFSA PLANT HEALTH MONITORING TEAM !

Questions?



Pest survey toolkit



Horizon scanning dashboard



#PlantHealth4Life



# STAY CONNECTED

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