ورشة عمل خطط الطوارئ كتمرين محاكاة عملي

Contingency Exercise Workshop

Xylella fastidiosa

Hammamet, Tunisia, 26 – 28 May 2025

Contingency plan for *Xylella fastidiosa*: Tunisian case

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The introduction and spread of pests, including the expansion in cross-border pest invasions, has become an increasingly concerning threat to the Near East and North Africa (NENA) Region.

- ✓ **Intensification of international trade** in agricultural and ornamental plants as well as plant products.
- ✓ **Climate Change** is altering the distribution, incidence and intensity of pests, and can allow the development of new ecological niches which allow the establishment and spread of pests into new geographical areas and from one region to another.

Why is it important to develop a pest-specific contingency plan ?

- **To eradicate a pest from an area, in particular for pests with a high potential of introduction, like *Xylella fastidiosa*.**

The Contingency plan for *Xylella fastidiosa* aims to:

- Ensure a **rapid** and **effective** response to an outbreak of *X. fastidiosa*. This pest has a crucial economic, environmental and social impacts.

- Help organization and namely the NPPO to be **prepared** to **eradicate** the outbreak of this pest, especially when several parties are needed to cooperate.

Country
Tunisia

Host

mainly Olive tree

Pest

Xylella fastidiosa

Input 0D – Contingency plans

The purpose of a Plant Health Contingency Plan is to set out the procedures to be followed and the measures to be taken in the event of an outbreak of a regulated pest, which could have the potential to cause significant economic, environmental and social impact. Contingency plans aim to ensure that the effects of a finding or outbreak would be minimised, and that eradication and control measures would be implemented in a timely and effective manner.

For this exercise we will use the EPPO Standard PM 9/10 *Generic elements for contingency plans* (Each group will be given this document) which details 12 essential elements as the framework to plan the emergency response:

(1) Background information on the pest (for pest-specific plans only);
(2) Initiation of a contingency plan;
(3) Official actions on presumptive diagnosis;
(4) Official actions to eradicate the pest after final confirmation;
(5) Review of measures in cases of prolonged official action;
(6) Determining completion of statutory action;
(7) Command structure;
(8) Stakeholder consultation;
(9) Internal communication and documentation;
(10) External communication;
(11) Testing and training of personnel;
(12) Evaluation and revision of contingency plan.

Each group will also be able to test the newly developed contingency plan of Tunisia

A number of national contingency plans will be provided to the participants during the workshop so they can assess the level of detail they should provide in their responses. These include contingency plans of:

(1) Spain
(2) France

The contingency plan includes 12 essential elements.

1. Background information on the *Xylella fastidiosa*

1.1. The pest and symptoms

The Pierce's Disease of grapevine, caused by *Xylella fastidiosa*, was firstly described in 1892. There are four known subspecies of *Xylella*

1.2. Hosts

Xylella fastidiosa is affecting more than **712 plant species** (EPPO, 2024) including species of high economic value such as **olive**, coffee, almond, lavender, etc.

1.3. Main pathways for entry and spread of pest

Xylella fastidiosa is transmitted by **xylem-feeding insects (insect vectors)**, and the trade and movement of plants for planting

Philaenus spumarius

The contingency plan includes 12 essential elements.

1. Background information on the *Xylella fastidiosa*

1.4. Quarantine status

The quarantine status of *Xylella fastidiosa* (listed by EPPO or in national legislation) for countries is provided at

https://gd.eppo.int/taxon/XYLEFA/categorization.

Since its outbreak in Europe, **Tunisia have prohibited the importation of olive trees from infected area** according to the Ministerial Order issued on May 31st, 2012, and revised on June 26th, 2015 by the Tunisian Minister of Agriculture.

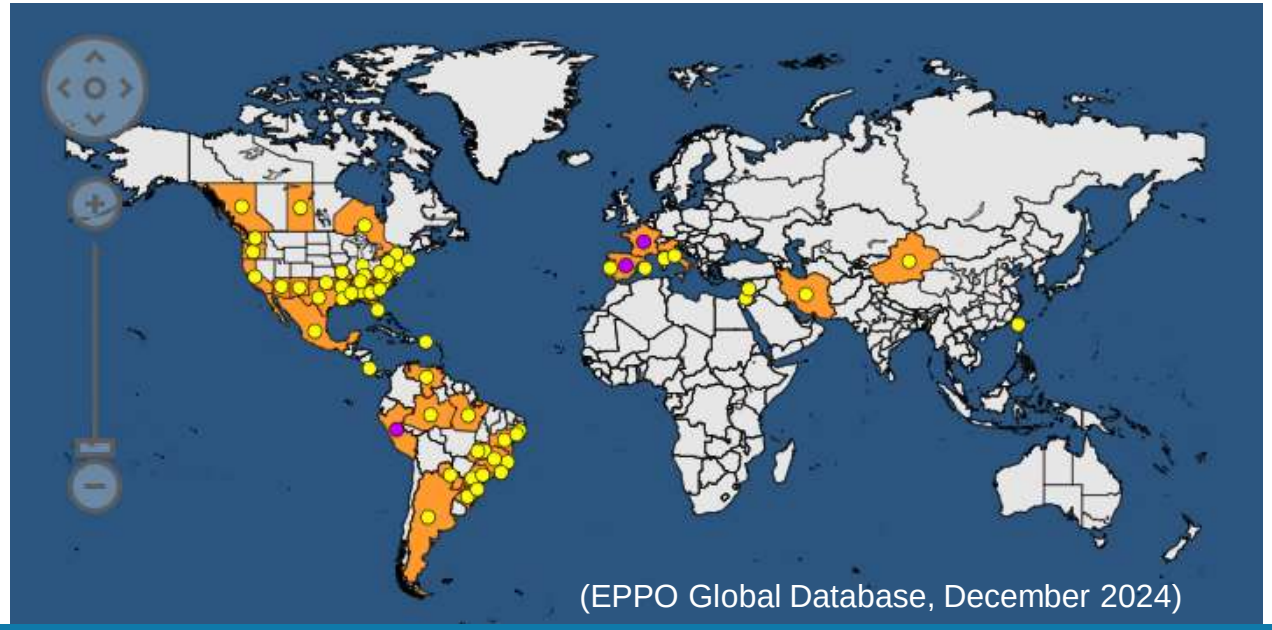
The contingency plan includes 12 essential elements.

1. Background information on the *Xylella fastidiosa*

1.5. Geographical distribution

The main distribution area of *X. fastidiosa* is on the American continent, from Canada to Argentina, its endemic area.

In 2013, it was found for the first time in Europe (Italy). Since then, outbreaks have been observed in France, Spain and Portugal.



(EPPO Global Database, December 2024)

No reports from North Africa

Reports in Lebanon, Iran (Near East)

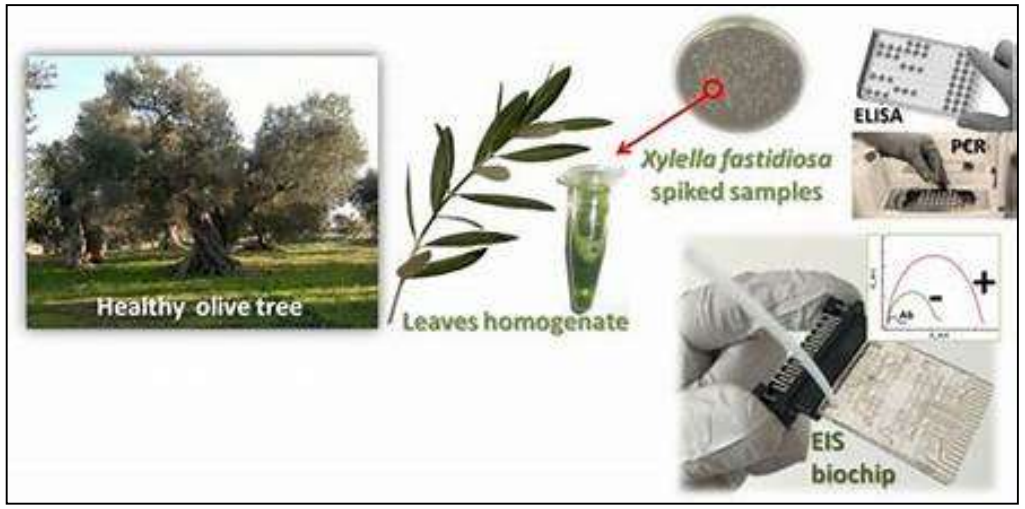
The contingency plan includes 12 essential elements.

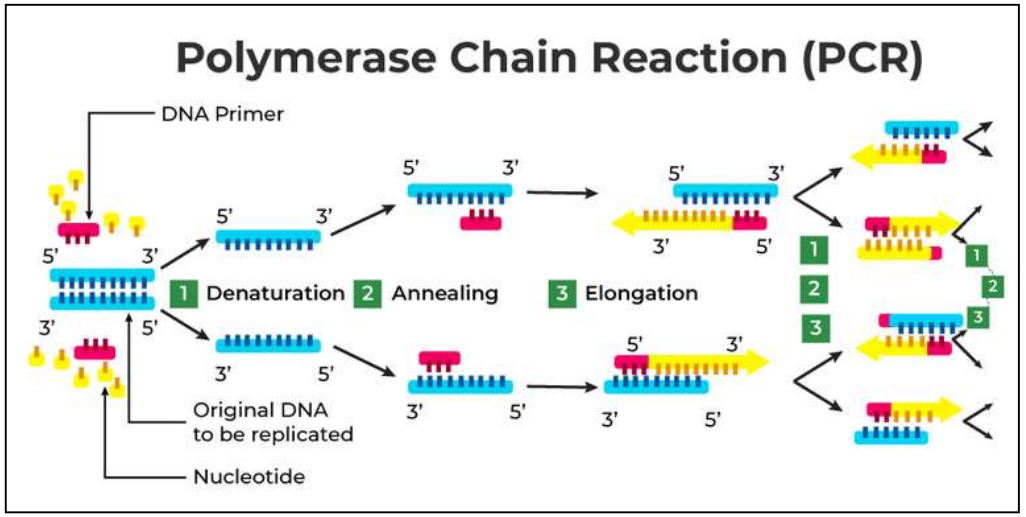
1. Background information on the *Xylella fastidiosa*

1.6. Detection methods

Serological and molecular tests are suitable for screening large numbers of samples (ELISA and PCR).

- **Serological tests** that were developed over the years include Enzyme-Linked Immunosorbent Assay (ELISA).
- **Polymerase Chain Reaction** (PCR)-based tests.





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1. Background information on the *Xylella fastidiosa*

1.7. Economic, environmental and social impacts of *Xylella fastidiosa*

Xylella fastidiosa threatens main crops of the NENA Region mainly:

- olive, citrus, stone fruit and grapes trees.
- forest trees.

High risk in NENA Region:

- the total quantity of production loss was estimated at around 5.06 million tons, representing 16.98% of the total harvested production (67.9% olives, 2% grapes, 28.7% Citrus spp., and 1.2% almonds).
- the total amount of employment loss was appraised at 131.2 million days (91.1% for olives, 2.3% for grapes, 4.4% for Citrus spp. and 2.1% for almonds).

1.8. References and web-links

Pest Risk Analysis documents:

- European and Mediterranean Plant Protection Organization (EPPO): EPPO website (http://www.eppo.org).
- Near East Plant Protection Organization (NEPPO)
- UK (2020): https://planthealthportal.defra.gov.uk/assets/pras/Xylella-Draft-PRA.pdf
- Australia (2022): https://www.agriculture.gov.au/sites/default/files/documents/draft-pest-risk-analysis-for-bacterial-pathogens-in-the-genus-xylella.pdf
- The European Food Safety Authority EFSA (2015) : https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2015.3989
- Guidelines FAO 2019.

file:///D:/NEPPO%202025/Meetings%202025/Meeting%20Xf%20NEPPO-EPPO/Guidelines%20Xf-FAO,%202019.pdf

- FAO-TCP-RAB-3601 Project: Report of Lebanon (2018)
- FAO-TCP-RAB-3601 Project: Report of Morocco (2018)
- Guidelines *Xylella* NEPPO-Ar

The contingency plan includes 12 essential elements.

2. Initiation of a contingency plan

Technical workshops and other knowledge transfer activities are keys to raise awareness among stakeholders and the general public about responses to plant health threats.

Today 6 groups are working with facilitators on the simulation exercise for contingency planning: *Xylella fastidiosa.*

3. Official actions on presumptive diagnosis

Diagnosis and confirmation of the bacterium will be done at the Laboratory of Quarantine Plant Pests at the General Directorate Plant Health and Control of Agricultural Inputs (DGPVCIA), the Ministry of Agriculture Water Resources and Fisheries of Tunisia.

4. Official actions to eradicate the pest after final confirmation

No treatment is available for curing *Xylella*-infected plants.

(i) Use of systemic insecticides against vectors to control secondary spreading within a crop, with repeated treatments over time;
(ii) Elimination of infected primary and alternative hosts of the pathogen and its vector(s);
(iii) It is forbidden to move plants for planting out of the delimited areas if they are identified as hosts of the pathogen, unless they belong to certified nursery productions.
(iv) It is forbidden to collect propagating material from plants inside the demarcated area.

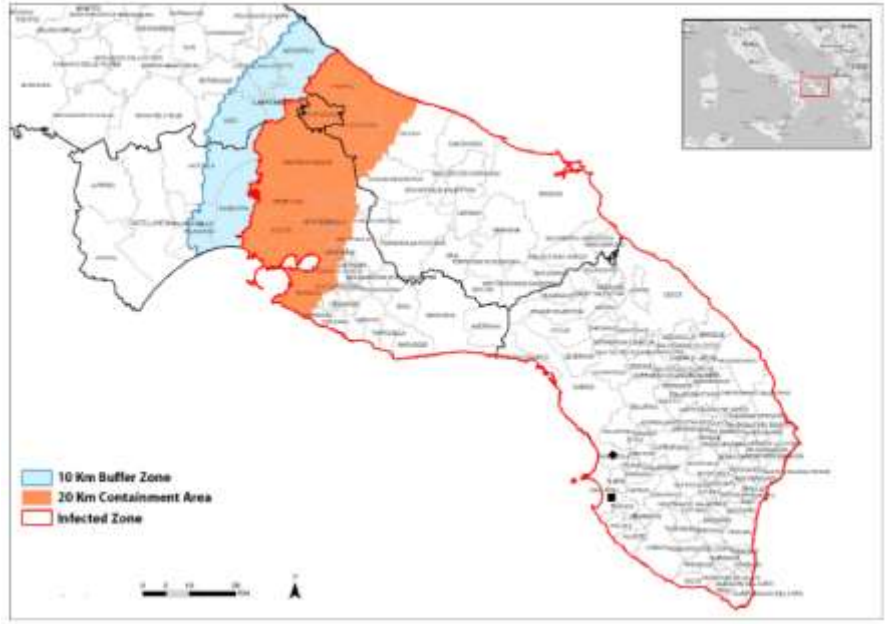
The contingency plan includes 12 essential elements.

5. Review of measures in cases of prolonged official action

Minimizing stresses: the first measure is to minimize stresses due to drought, weeds, overproduction, other diseases, primarily those affecting the wood.

Pest free area: It is very important to create a pest free area. Thus, three demarcated areas (infected area), (buffer zone) and (containment area) will be installed.

Containment area and buffer zone: two primary actions will be implemented in these two areas. The first action is to verify that there is no infection through the extensive and continuous monitoring of vectors, olives and alternative hosts for the presence of *Xylella fastidiosa*. The immediate removal of infected plants should the disease enter the area. The second action is to preserve the health status of the olives and other susceptible hosts through chemical treatment against vectors (adults) and mechanical weeding against vector juveniles (nymphal stages) at specific times.



The contingency plan includes 12 essential elements.

6. Determining completion of statutory action

Regional guideline: A simulation exercise for contingency plan *Xylella fastidiosa*.

7. Determining completion of statutory action

- The Ministry: Ministry of Agriculture Water Resources and Fisheries of Tunisia.
- The Central Directorate: General Directorate Plant Health and Control of Agricultural Inputs (DGSVCIA).
- The Regional Commissary: Regional Commissary for Agriculture Development (CRDA Ben Arous).

8. Stakeholders consultation

- Stakeholders: traders, importers, customs, nurseries, chamber of commerce, industry involved in the olive agriculture, farmers, cooperatives, farmer unions, agriculture engineers, researchers, syndicate, etc.
- Inter-Professional: Interprofessional Fruit Group (GIFruits), Citrus Technical Center (CTA).
- Governmental and non-governmental authorities: Ministry of Agriculture Water Resources and Fisheries of Tunisia, Ministry of Environment, Ministry of Economy and Trade, NGOs, Research institutes, Universities, Municipalities and Regional authorities.

The contingency plan includes 12 essential elements.

9. Internal communication and documentation

- Maps of the Region of Ben Arous
- IPPC / EPPO standards
- Draft Tunisian contingency plan

10. External communication

- The Media of the Ministry of Agriculture Water Resources and Fisheries of Tunisia
- Regional Radio
- Mass media

11. Testing and training of personnel

- ❖ The Central Directorate: General Directorate Plant Health and Control of Agricultural Inputs (DGSVCIA).
- ❖ The Regional Commissary: Regional Commissary for Agriculture Development (CRDA Ben Arous).

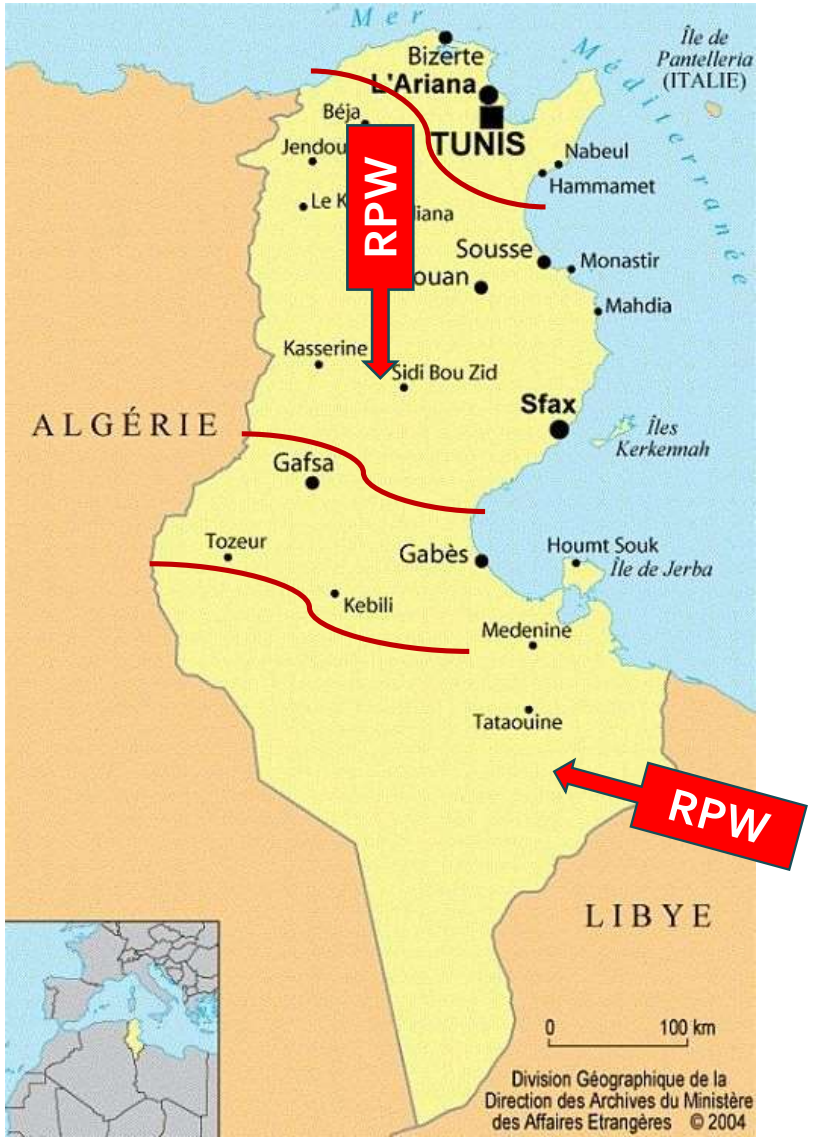
The contingency plan includes 12 essential elements.

12. Evaluation and revision of contingency plan

Following the conclusion of this simulation, a review should be undertaken to assess the effectiveness for the contingency plan.

The evaluation will involve holding meetings with the affected grower(s), industry bodies and other stockholders to obtain their feedback on the eradication program.

RPW: *Rhynchophorus ferrugineus*



PWN: *Bursaphelenchus xylophilus*

Monochamus galloprovincialis

Is widely distributed in Tunisian pine forests, is more common on Aleppo pine (86%), on maritime pine (11%) and rarely on pinon pine (3%) (Mejri *et al.*, 2014).

EPPO Contingency Exercise Workshop for a Forestry Pest

Zlatibor, Serbia, 2018-11-27/29

The pest chosen for the scenario was pinewood nematode (*Bursaphelenchus xylophilus*, or PWN). EPPO has recently revised its PM 9 Standard on regulatory control systems for this pest, and the revised Standard was one of the sources of guidance available for the teams. The main purpose was not to learn more about PWN (though we did, of course, from the experts present) but to recreate the confusion and stress of a real emergency and learn from that experience how to pull together an effective team to manage the response to an outbreak.

Thank you

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