



الاتفاقية الدولية  
لوقاية النباتات

国际植物  
保护公约

International Plant  
Protection Convention

Convention internationale  
pour la protection des végétaux

Международная конвенция по  
карантину и защите растений

Convención Internacional  
de Protección Fitosanitaria

**The IPPC High-level Symposium on Cooperation of the Phytosanitary Measures  
among the Chinese Initiative “One Belt” Countries  
27-30 May 2019 in Xián, Shaanxi, China.**



# **Presentation of the phytosanitary activities of Tunisia**

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**General Director of Plant Health and Control of Agricultural Inputs  
Focal Point of IPPC  
TUNISIA**

# 1. Agriculture and Plant Protection in Tunisia

- ✓ Tunisia covers 165,000 square kilometers.
- ✓ Tunisia's population was 11.435 million in 2017.
- ✓ Agriculture contributes 9% GDP (Gross Domestic Product), employs 16% of the workforce, and accounts for 9% of investments and exports.
- ✓ Tunisia's main agricultural products include cereals (hard and soft wheat and barley), olives, dates and citrus fruits, and vegetables.
- ✓ The main agricultural importations are hard and soft wheat, vegetables seeds, corn and barley.
- ✓ The main agricultural exports are olive oil, dates and citrus.

## 2. Phytosanitary legal framework

The phytosanitary legal framework are 2 laws :

- ✓ Law n ° 92-72 of 03 August 1992: protection of plants and pesticides.

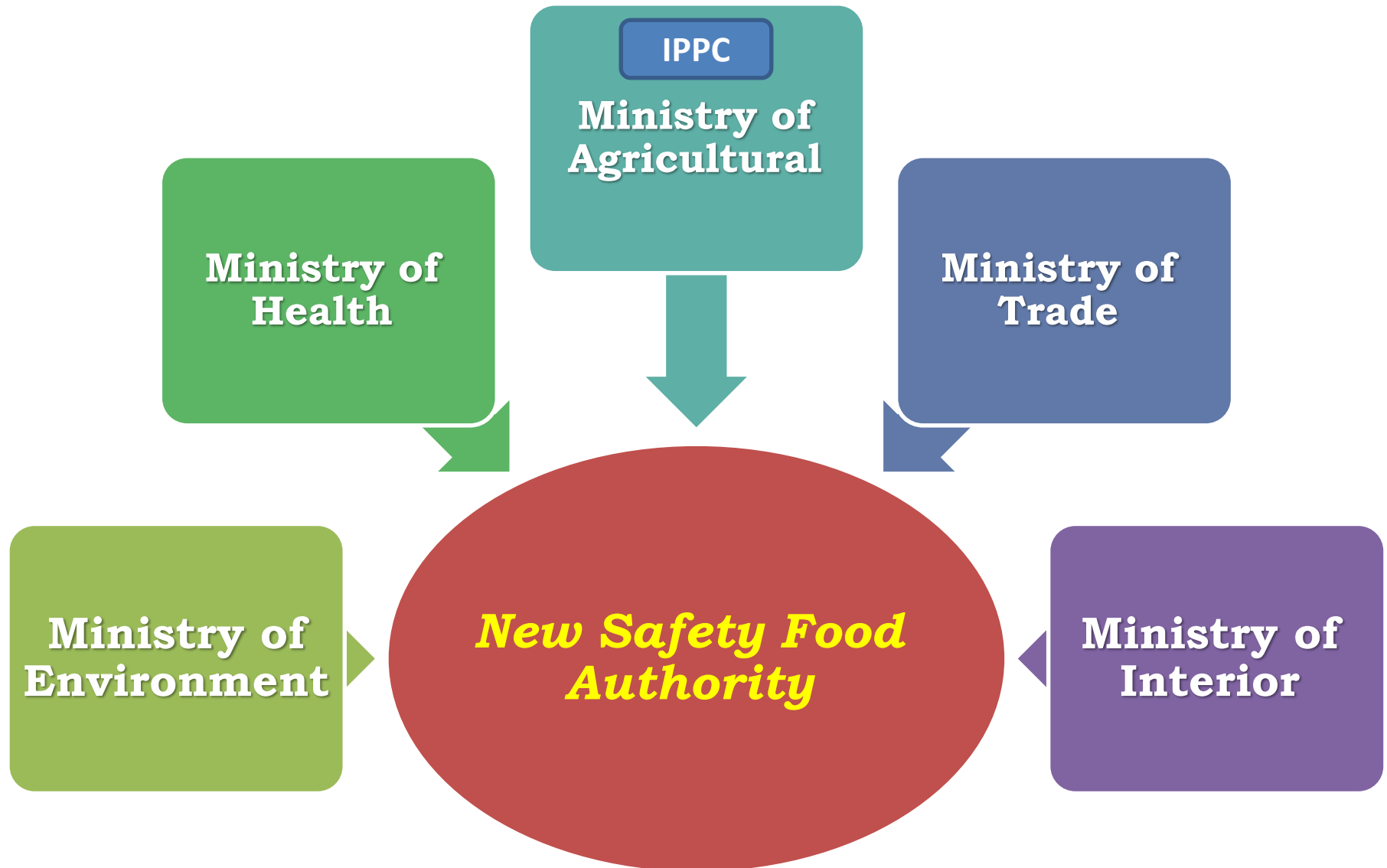
- ✓ Law No. 99-5 of 11 January 1999: seeds and plants.

- Order of the Minister of Agriculture, water resources and fishing of 19 February 2016: phytosanitary measures and the procedures for control of plants and plant products imported into Tunisia.

- Order of the Minister of Agriculture of May 31 2012, fixing the list of quarantine pests.

- And others, orders and circulars.

***New Law: Law N°. 25 of 2019 dated February 2019, relating to the health of food and food of animals.***



### 3. Plant Protection in Tunisia

- ✓ The NPPO (General Direction of Plant Health and Control of Agricultural Inputs) contains two directions:
  - 'Direction of Plant Protection' divided on 3 sub-directions (Local health, Quarantine, and regional station),
  - 'Direction of Control of Agricultural Inputs', divided on two sub-directions: 'Seeds and Plants' and Control Pesticides).
- ✓ There are 27 ports of entry, 12 border ports, 8 airports and 7 maritime ports.

## **Stakeholders involved and their role:**

The GD/ Plant Health and Control of Agricultural Inputs as a NPPO is responsible to:

- 1.** Control the import of agricultural products and border inputs and certify import permits for agricultural inputs,
- 2.** Monitor the evolution of quarantine pests, set up programs to control and limit their spread.
- 3.** Diagnostic and identify plant diseases,
- 4.** Give the necessary warnings to fight pest outbreaks and carry out national control campaigns, monitor and evaluate their execution.
- 5.** Control the phytosanitary status of plant products intended for import and export,
- 6.** Coordinate with national and international institutions specialized in sanitary control, the quality of inputs and plant products,

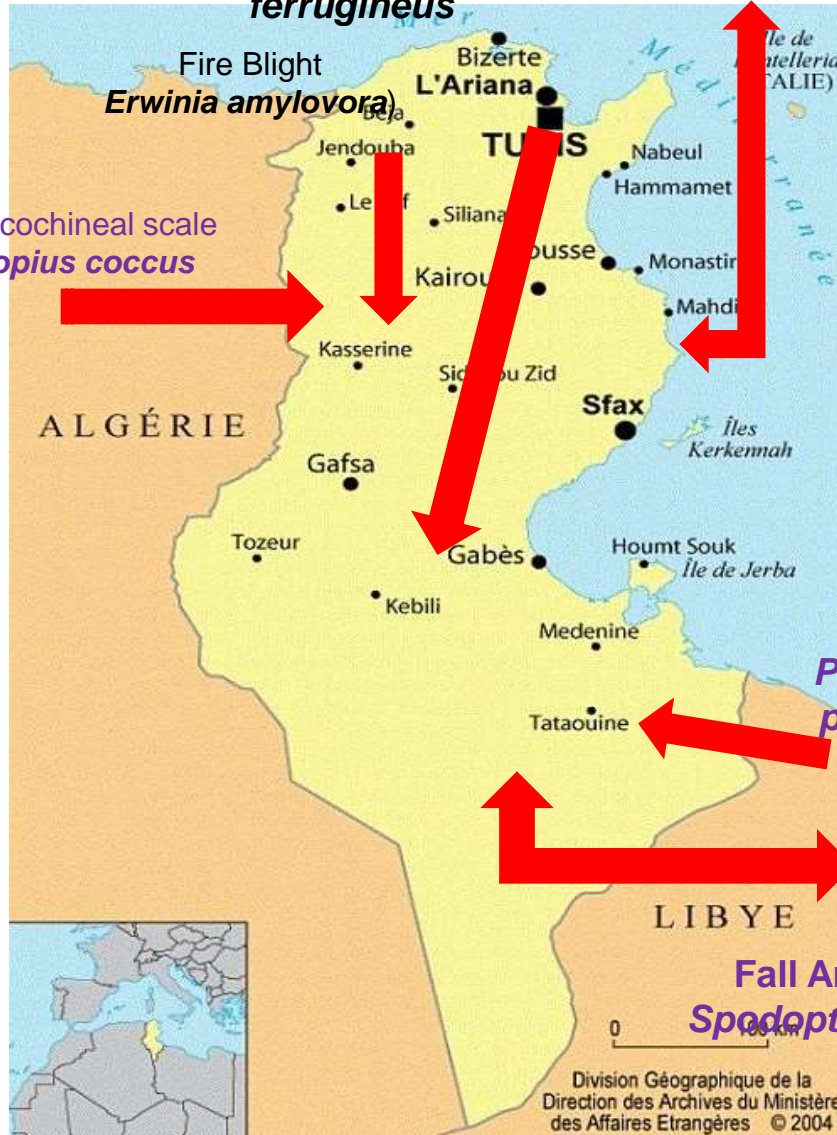
# 4. Invasive Alien Species

Red Palm Weevil  
*Rhynchophorus ferrugineus*

Olive Quick Decline  
*Xylella fastidiosa*

**Main emerging pests**

Opuntia cochineal scale  
*Dactylopius coccus*



Fall Army Worm :  
*Spodoptera frugiperda*

Emerging pests in neighbor countries❖



## Red Palm Weevil (*Rhyncophorus ferruginus*)

RPW is a key transboundary pest of date, coconut and ornamental palms that originates from South Asia and is rapidly spreading throughout the world.





## Red Palm Weevil (*Rhyncophorus ferruginus*)

- ❖ It is present in North Africa and the Mediterranean Basin. It was detected in Tunisia since November 2011 on environmental palm (*Phoenix canariensis*) in North part on Tunisia.
- ❖ Weak quarantine procedures and difficulties in the early detection of RPW-infested plant materials have contributed to its rapid spread.
- ❖ RPW has not been effectively managed despite efforts and resources provided.

# RPW – on *Phoenix canariensis* (Tunisia)

**Health**

**palm**



**First  
stage**



**Second stage**



**Fourth  
stage**



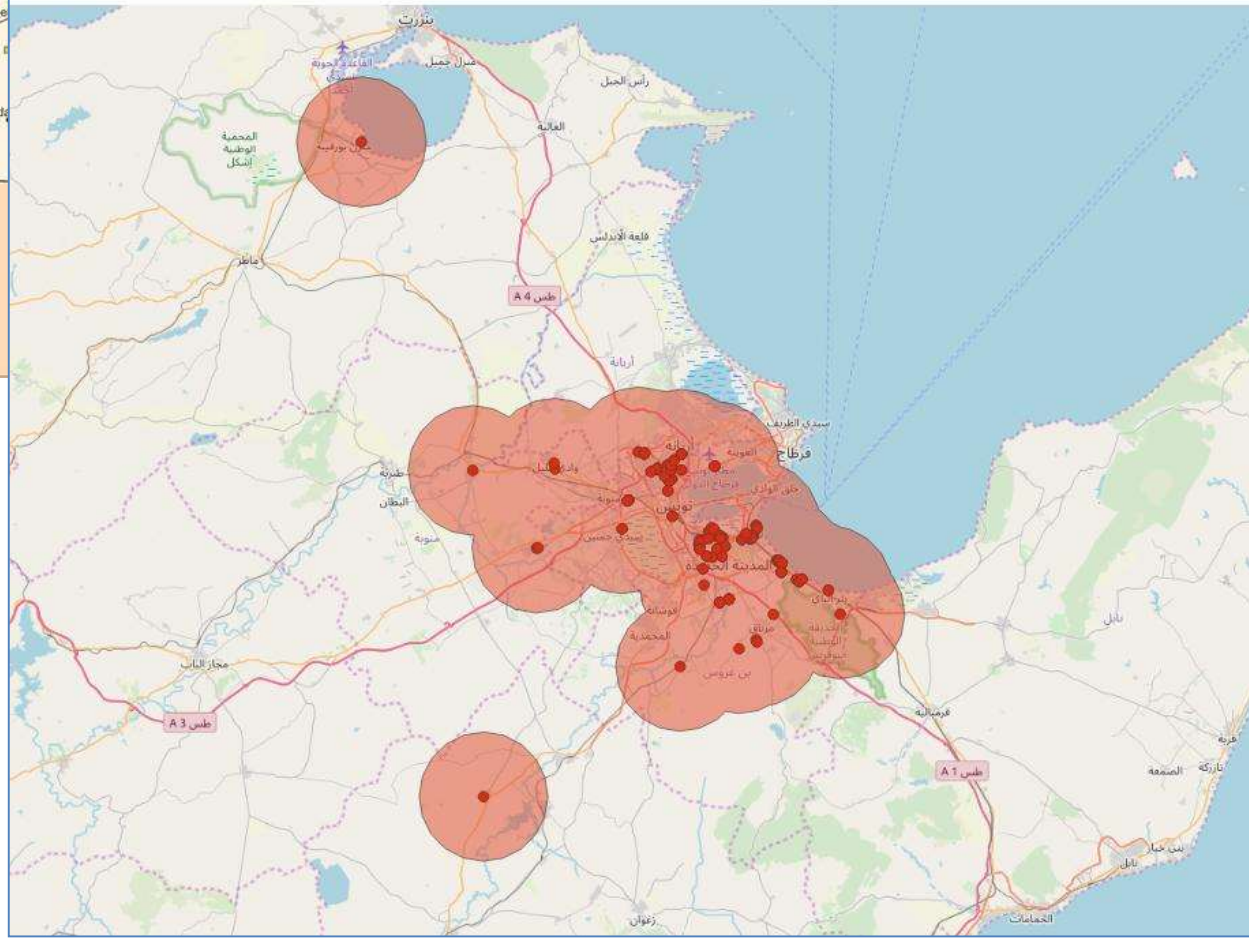
**Third  
stage**





**50000 ornamental palms  
(*Phoenix canariensis*),  
8000 ornamental dead (16%)**

**Palmiers infestés et zone de sécurité (janvier 2019)**



MINISTRE DE L'AGRICULTURE,  
DES RESSOURCES HYDRAULIQUES  
ET DE LA PÊCHE





**Our fear is his arrival in the southern oasis. This ecosystem is fragile and plays an important social and economic role.**

- ❖ Area 41000 hectares;  
5,4 millions date palm,  
400 oasis, 4 provinces,
- ❖ 2<sup>nd</sup> agricultural product  
export;
- ❖ Contribution in the  
agricultural product  
(16%),
- ❖ Employ 60000 families,
- ❖ Annual production  
200000 Tons (2% of world  
production): 1<sup>st</sup> one  
(32%).



# *Xyllela fastidiosa*

*X. fastidiosa* is originate from the American continent.

First report of Xf in the EPPO region in Italy (2013).

*X. fastidiosa* is reported to infect more than 500 different host plants from more than 70 botanical families,

Different subspecies were detected : *X. fastidiosa* subsp. *fastidiosa*,  
*X. fastidiosa* subsp. *Multiplex* and *X. fastidiosa* subspecies *pauca*,





# Symptoms

**Citrus**



**Grapes**



**Olive**



**Ornamental  
species**



## Vector insects



*Philaenus spumarius*



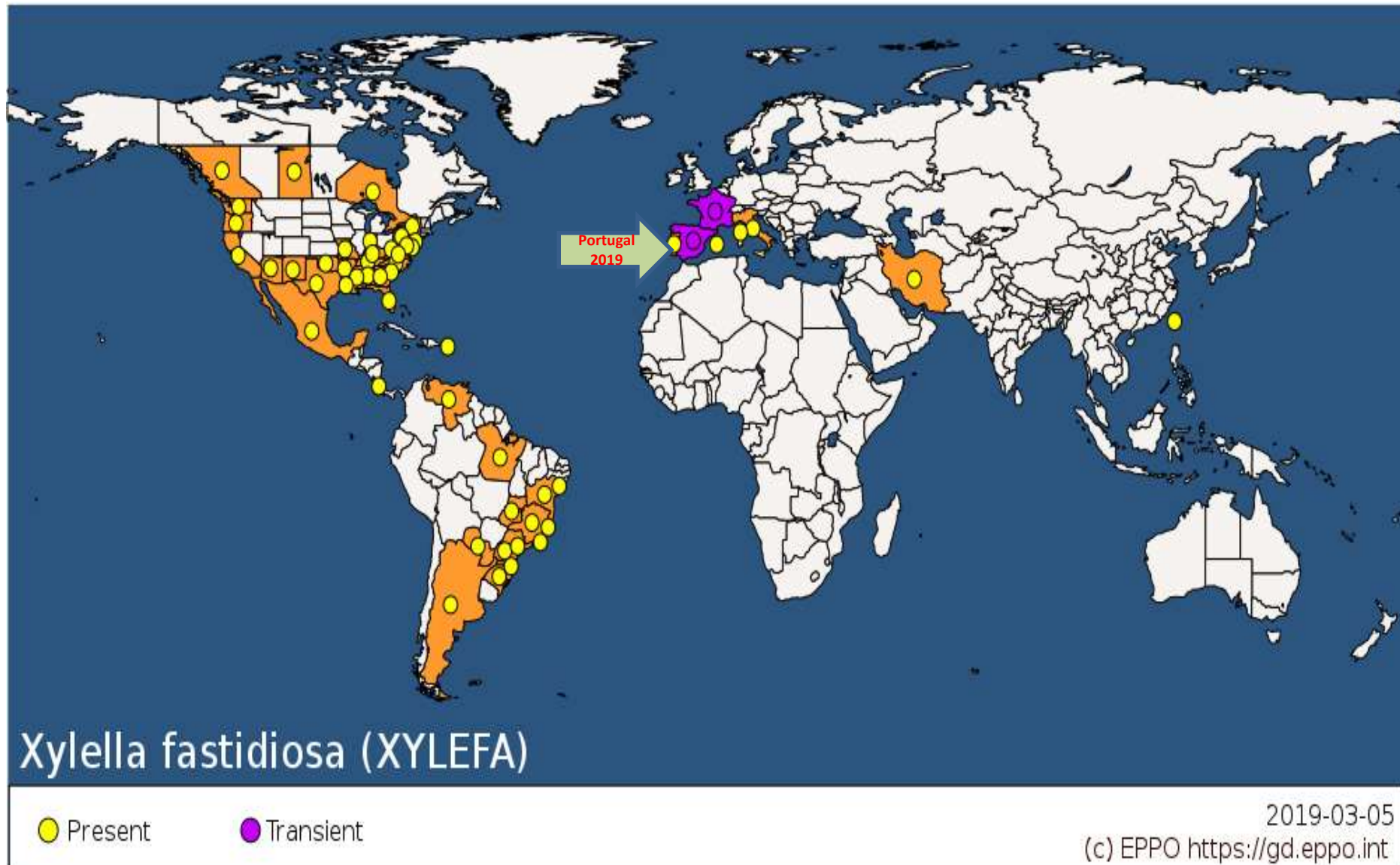
*Xyphon fulgida*



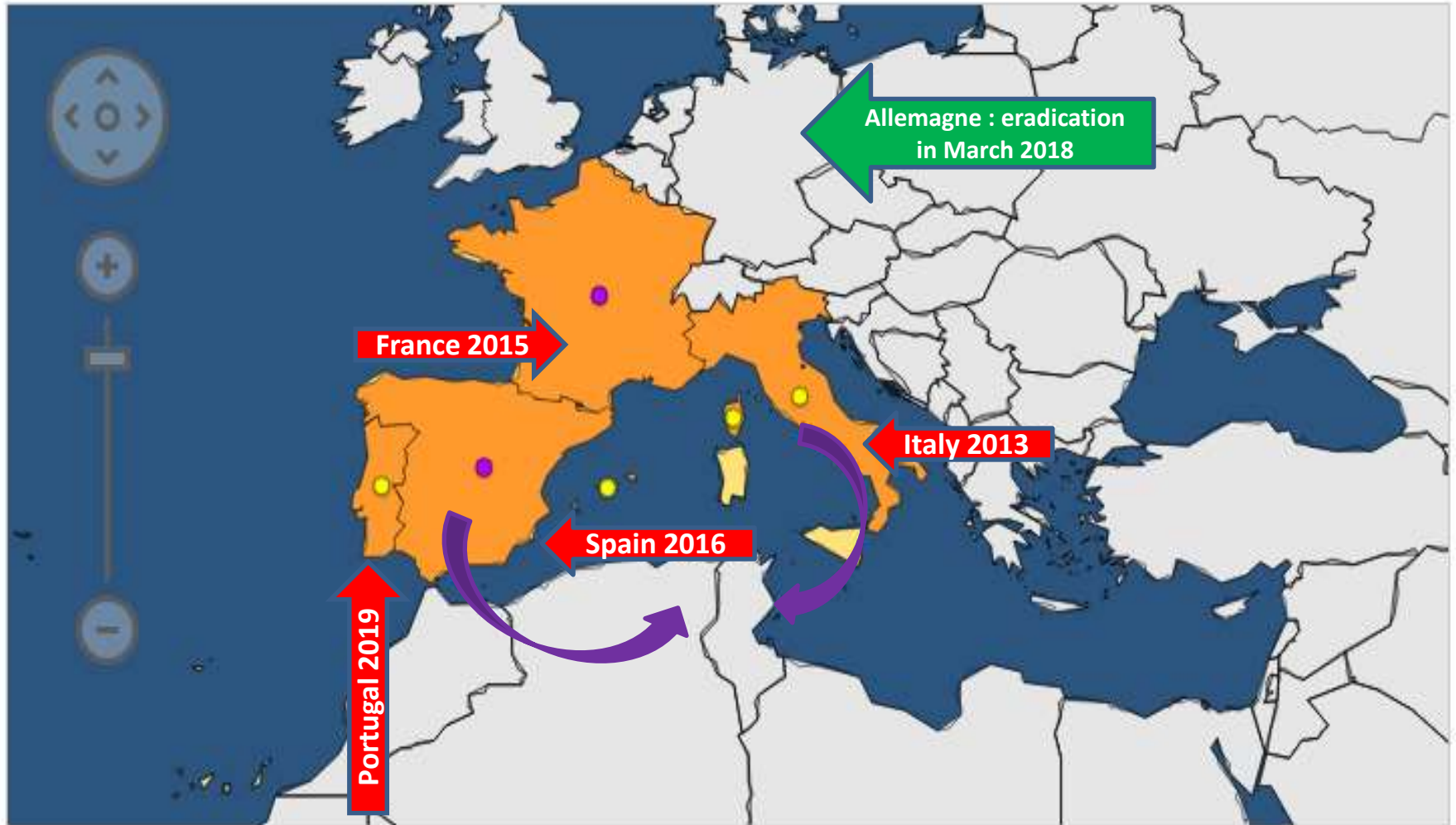
*Homalodisca vitripennis*



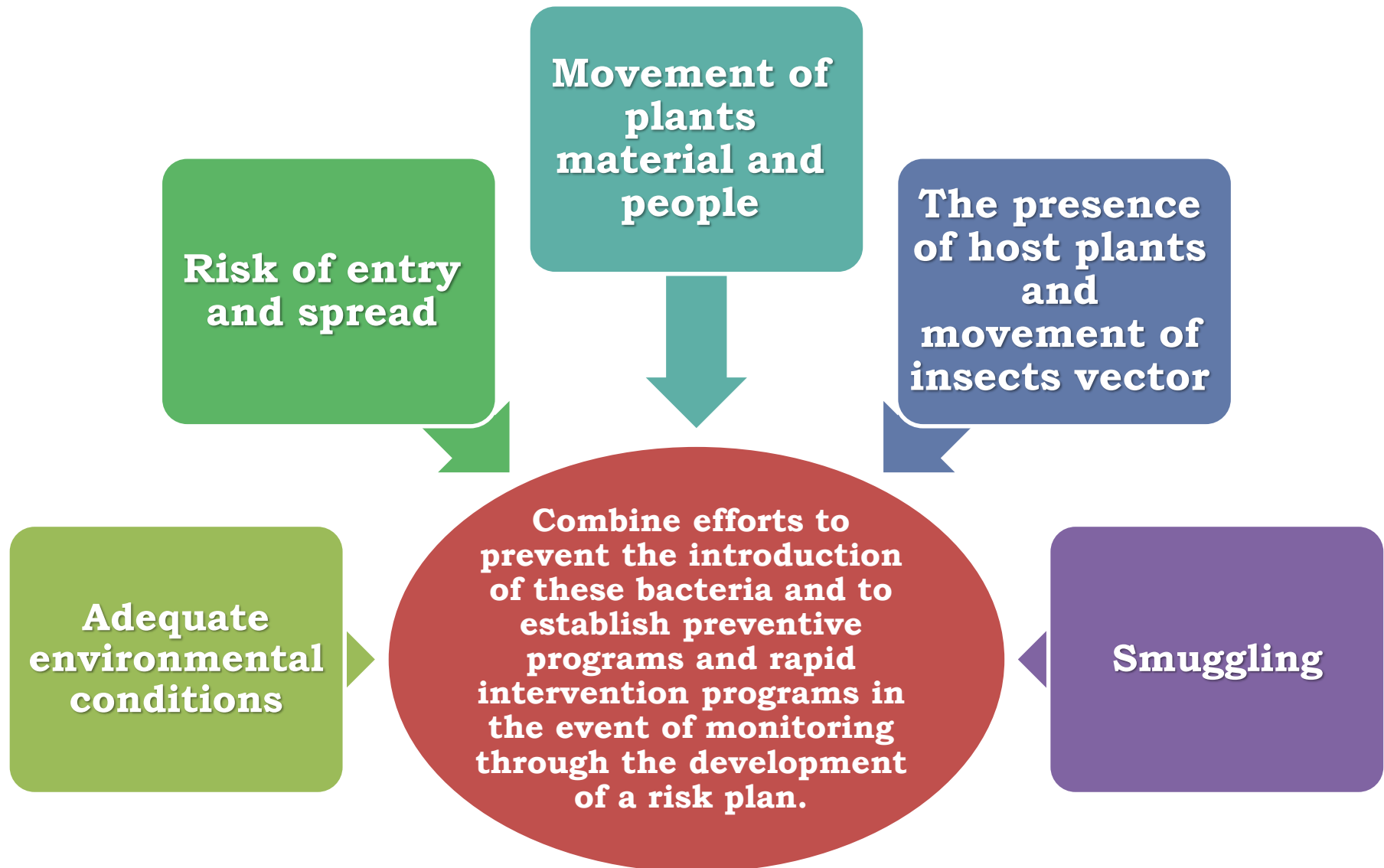
# Distribution in world



# Distribution in the neighbor countries



# The risk of leaking bacteria is very large





Tunisia's olive resources are estimated at over 65 million olive trees, grown on 1 680 000 ha, of which 75 000 ha are for certified organic crops.

It is a source of employment for 269 000 or 57% of the country's farmers and accounts for 45% of the agricultural exports, averaging 120 000 t per year.



# Strategy to avoid introduction and eradication in case of introduction

## Tasks

**Task 1. Laws and Legislations**

**Task 2. Border control**

**Task 3. Monitoring**

**Task 4. Nurseries control**

**Task 5. Information and training**

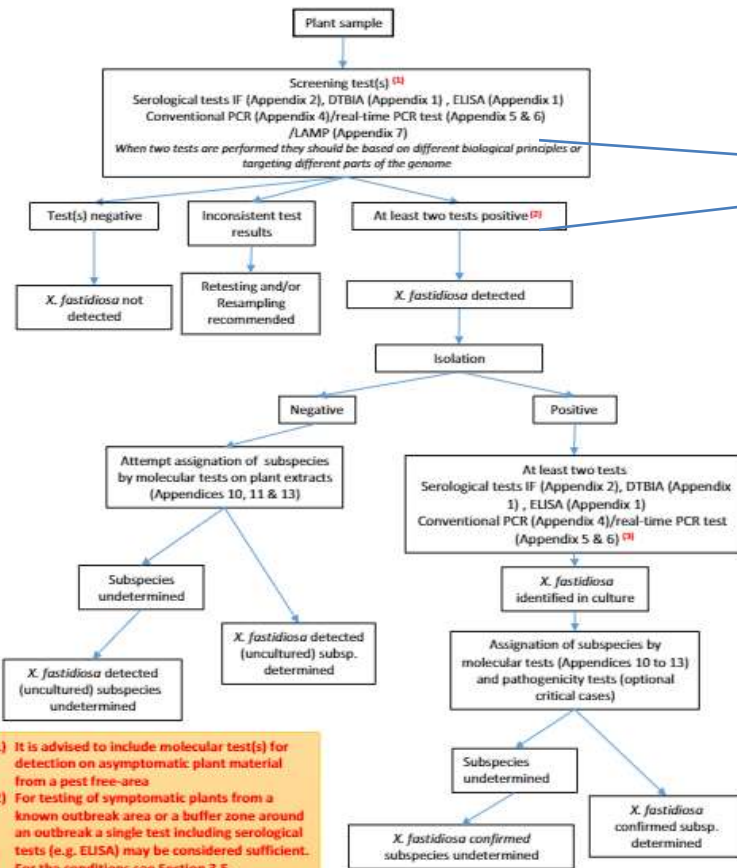
**Task 6. Scientific research**



# Monitoring in Tunisia

Field observations of symptoms on branches of Olive groves.  
Laboratory tests showed that all samples were free of *Xylella fastidiosa*.





- (1) It is advised to include molecular test(s) for detection on asymptomatic plant material from a pest free-area
- (2) For testing of symptomatic plants from a known outbreak area or a buffer zone around an outbreak a single test including serological tests (e.g. ELISA) may be considered sufficient. For the conditions see Section 3.5.
- (3) Molecular tests for assignation of subspecies can be used for confirmation of the identification of *X. fastidiosa*

Fig 1 Flow diagram for the diagnostic procedure for *Xylella fastidiosa* in plant material.

## Costs



### Serologic Test ELISA

**1 sample = 12  
DNT  
(4 dollars)**

### Molecular Test Test Lamp

**1 sample = 240  
DNT  
(80 dollars)**

### Confirmation Test (PCR Real time)

**1 sample = 75 DNT  
(25 dollars)**

**Total Cost for one sample to  
detect *Xylella fastidiosa*  
327 DNT  
(109 dollars)**



## **5. Strength international, Regional and bilateral cooperation in Phytosanitary Measures among the Chinese Initiative “the Belt and Road” countries**

- To be conducted by the IPPC Secretariat: Diagnostic protocols upgrade the quarantine laboratory to be able to perform these analyzes in accordance with international standards for phytosanitary measures.
- To be conducted by the Belt and Road countries: Reinforcement of preventive actions against the introduction and dissemination of emerging organisms mainly *Xylella fastidiosa*, Cochineal cactus, Fall Army Worm, Phytoplasmas and Viroid and their insect vectors.
- To be conducted by the Chinese Ministry of Agriculture: Territorial monitoring system in the context of exports, and integrated pest integrate management, Risk Phytosanitary Analysis as a scientific tool for the justification of phytosanitary and plant protection measures and essential for the legislative framework of import and export and maintains a reasonable, healthy and barrier-free free trade aimed at ensuring food security.

# Quarantine – International cooperation



Rome, 6<sup>th</sup> March 2019

**Subject: Your application to the Call for Cases**

Dear Mr Ben Jamâa,

We are pleased to inform you that your Trade Case has been selected for implementation through the use of Beyond Compliance Tools (Tools), pest risk management decision support Tools, as part of the project "Rolling out Systems Approach Globally: sharing tools for enhanced application of Systems Approach and market negotiation on plant pest risk" (MTF/INT/336/STF STDF/PG/503) (Project).

I would like to once again emphasize that the Project will assist in your ongoing work on the given Trade Case. It is not a theoretical training or case study. The success of the implementation will very much depend on your input and activities.

You will be supported by a technical team from Imperial College London (ICL) and a Facilitator, who is being trained under the same Project on the use of the Tools. A summary of the responsibilities is in the attached Statement of Commitment and Confidentiality Undertaking is to be signed by your NPPO.

If you are still interested in being part of this Project, please sign the attached Statement of Commitment and send it back as a scanned document to the below email addresses with the email subject line "Confirmation for the BC Trade Case" by 15 March 2019:

- Ms Ketevan Lomsadze, IPPC Secretariat Implementation Facilitation Officer ([ketevan.lomsadze@fao.org](mailto:ketevan.lomsadze@fao.org))
- With copy to : Ms Megan Quinlan, ICL ([m.quinlan@imperial.ac.uk](mailto:m.quinlan@imperial.ac.uk))

Once your confirmation is received, we will send you further instructions.

On behalf of the IPPC Secretariat, we would like to thank you for your application and are looking forward to working with you.

Yours sincerely,

Jingyuan Xia  
Secretary

International Plant Protection Convention (IPPC)

**National Plant Protection Organization of [Tunisia] (NPPO)-** Implementation of Trade Cases Submitted under the Project "Rolling out Systems Approach Globally: sharing tools for enhanced application of Systems Approach and market negotiation on plant pest risk" (MTF/INT/336/STF STDF/PG/503).



***(Tunisia faces the risk of Xylella fastidiosa: reaching appropriate level of protection without restrictions to international trade)***

A close-up photograph of an olive branch with several green olives. The branch is in the foreground, slightly out of focus. The background is a bright, warm sunset or sunrise, with the sun low on the horizon, creating a strong lens flare and a golden glow. The sky is a mix of orange, yellow, and light blue. The overall mood is peaceful and grateful.

**Thank you**