

# The Pine Wilt Disease in the Iberian Peninsula: 25 years after the first detection of *Bursaphelenchus xylophilus*

T1.33 The Pine Wilt Disease dramatic impact on conifers forest across the world, today and in the future

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## Abstract

Pine Wilt Disease (PWD), caused by the pinewood nematode (PWN) *Bursaphelenchus xylophilus*, is a causal agent of mortality of pines (*Pinus*) in countries where it was accidentally introduced, i.e in Japan, China, Korea, Taiwan, Portugal and Spain. International trade of infected wood is the main pathway for PWD spread. In the Iberian Peninsula, *B. xylophilus* causes mortality mainly in maritime pines (*Pinus pinaster*), although small plantations of *P. nigra* and *P. radiata* were also found affected by the nematode. Efforts implemented by the Portuguese Forest Authority (ICNF) follow the guidelines of the Commission Implementing Decision 2012/535/EU. These actions involve forest surveys to detect and eliminate wilting and declining pine trees, during the autumn and winter months, placing of traps to monitor and control the insect-vector (*Monochamus galloprovincialis*) during its spring-summer flight period, regulation and inspection activities to economic operators (e.g., wood transport, wood exports), and public awareness.

In this presentation, we will give a general overview of the Portuguese national strategy against this alien pathogenic nematode, with an update on the PWD management made during the last 25 years, with the overall impact in the Portuguese pine forests and the changes and improvements made along the years on the strategies and methodologies applied. The evolution of the situation in the Spanish territory, since the first detection in October 2008, will also be presented.

Finally, on-going research will also be reported, aiming not only the improvement of remote detection of wilting pines and the insect-vector trapping but also the development of innovative survey and control methods based on Volatile Organic Compounds released by the PWN and its insect-vector, within projects such as "PURPEST-Plant pest prevention through technology-guided monitoring and sitespecific control" and "Reassessing the threat posed by the pinewood nematode (*Bursaphelenchus xylophilus*) to UK forestry: exploring alternative vectors and novel detection tools".

Key words: Pinewood nematode, *Monochamus galloprovincialis*, control, Europe.