

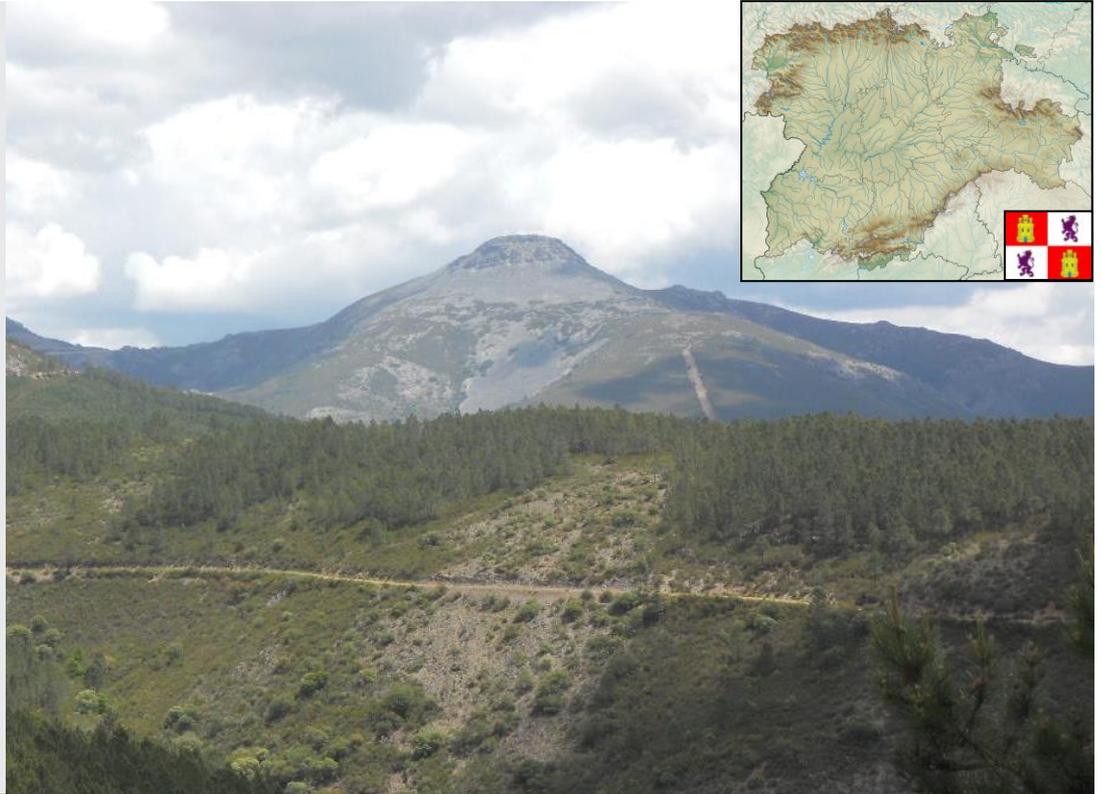
Tools used for the early detection of trees infested by the pine wood nematode in Castilla y León

PLURIFOR PROJET

Pine Wood Nematode Workshop,

Oeiras (Portugal)

26/01/2018



Tools used for the early detection of trees infested by the pine wood nematode in Castilla y León



National Contingency Plan and Operational Protocols



Field sampling: objective and methodology



Field sampling: operation



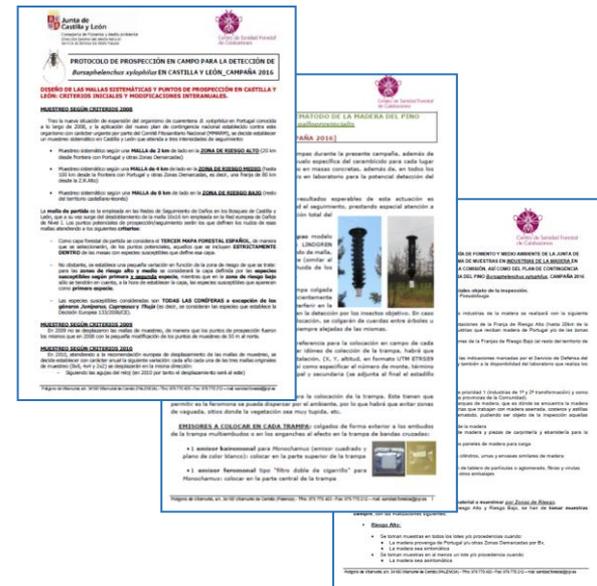
Action Plans

1 National Contingency Plan and operational protocols

The contingency actions of PWN in the territory of Castilla y León are constituted by **four operational protocols** whose content is based on what is specified in the **National Contingency Plan** currently in force:

1. Field sampling.
2. Trapping vector insect (*Monochamus*).
3. Road inspection.
4. Sampling in woods industries.

These protocols were redacted to **specify the actions to be carried out according to their work methodology and according to the available resources**; In addition, they **include particular measures** of which there is proven experience of their effectiveness.

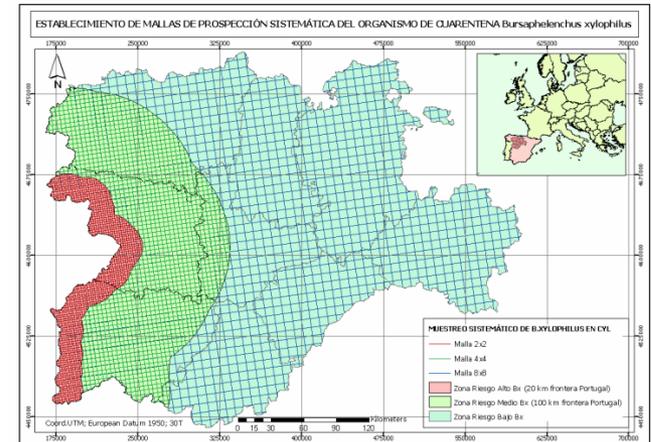


Objective: find trees with possible symptoms of decay by PWN

It is based on **two types of different sampling**:

I. Sistematic sampling: in a network of predefined points:

- 1) 2x2 Km (<20 Km Portugal) H.R.Z.
- 2) 4x4 Km (20-80 Km Portugal) M.R.Z.
- 3) 8x8 Km (Rest of CyL region) L.R.Z.



II. Sampling directed to areas with decay: in pre-selected areas from:

- 1) Transects between points of the systematic network
- 2) Phytosanitary alerts (forest guards or technical)
- 3) Environment of areas burned in previous years.
- 4) Recognition flights on special interest areas (proximity of decamarcated areas, high risk area, border between Cáceres and Salamanca and environment of certain wood industries,...).



3

Field sampling: operation

In demarcated areas and in special interest areas the trees with possible symptoms are **always cut** and **samples are taken from the area showing these symptoms.**

The pursued of this of action is:

- Direct the sampling to the area of the tree where the symptoms are located to **avoid false negatives.**
- **Do not recount from the air the trees of those that have already been sampled twice.**

Any way, the cut down trees are ever removed of the stand and appropriately destroyed .



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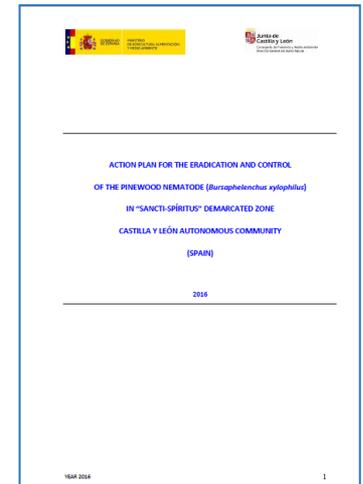
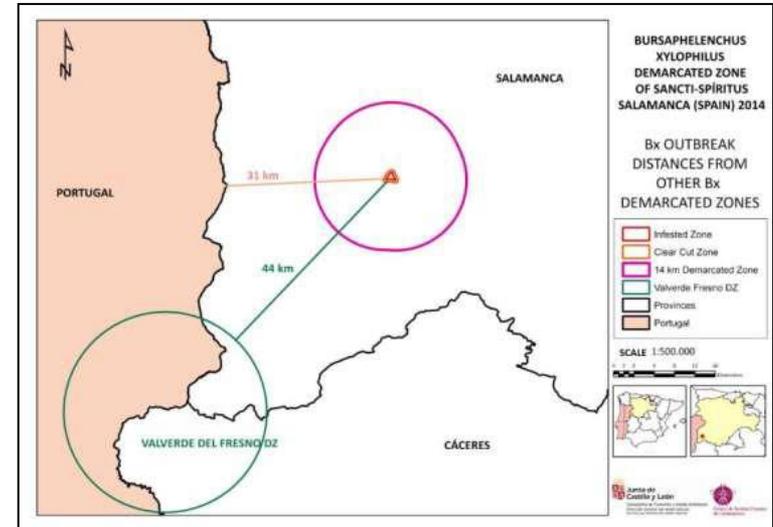
Action Plans

To date, only two NMP positive points have been located whose demarcated areas affected the territory of Castilla y León:

1. **Valverde del fresno** (2012): outbreak declared eradicated at the beginning of 2017.
2. **Sancti-Spiritus** (2013): has been declared eradicated this week.

The main measures implemented in these areas are included in the so-called **Action Plans**:

1. Elimination of dead or symptomatic trees (after taking samples).
2. Intensive trapping of *Monochamus*.
3. Control sensitive wood traffic on roads.





Acknowledgement:

