

## FINAL REPORT OF SEMINAR

**Report of the International Seminar on Control Strategies for Pine Wood Nematode in Portugal (Lisbon, 7-9 October 2008)**

1. The latest modeling prediction for the impact of Pine Wood Nematode (PWN) for the European Union (EU) implies a huge impact: under the current climatic conditions, high pine mortality in southern Europe and low mortality but PWN establishment in northern Europe. This does not take into account any impact of possible climate change.
2. Complete eradication of PWN in all infested areas in Portugal is no longer possible. The realistic aim should now be to eradicate local PWN infestations and elsewhere contain it.
3. Concerning the long-distance dispersal of PWN, the experience from PWN-affected countries in Asia shows that human activities are the key factor for outbreaks in new areas. In particular, this concerns the movement of infested wood of all kinds; e.g. fire wood, wood debris, wood packaging material (WPM). Therefore, legal measures, enforcement of measures, communication about measures, and monitoring of compliance should focus on this risk, first of all.
4. The experience from PWN-affected countries stresses the importance of effective government action, at all levels, to successfully eradicate and control natural and human-activity-related spread of PWN. Continued effective implementation of the PWN strategy and legal provisions is crucial. This includes having appropriate legal provisions in place nationally, and attribution of the necessary authority to the National Plant Protection Authority (NPPO) to implement measures including when forest owners are not known and when plant health legislation is in conflict with environmental or fire prevention legislation. A punitive system needs to be in place in case of non-compliance.
5. In the light of the findings of PWN in new areas in Portugal in 2008, a retrospective analysis is needed to determine the likely causes of the spread of the disease. More in general, a retrospective analysis is needed of the strengths and weaknesses of the PWN eradication and control actions in the past decade,

## FINAL REPORT OF SEMINAR

so as to draw lessons and allow for better prevention and control in future.

6. An updated strategy and guidelines are needed for future management of the PWN threat to the EU.
7. Surveys to assess the success of local eradication strategies combined with ongoing general surveys may be used to delimit the total area infested by PWN.
8. Member States should develop and regularly update PWN contingency plans, including having the necessary legal provisions in place beforehand, as well as survey programmes.
9. The technical aspects of the updated control strategy should be reconsidered, taking account of the following:
  - a. Measures should focus on the vector and on affected and dead trees as critical points for breaking the PWN infestation cycle;
  - b. The methods for monitoring, sampling and detection should be improved and their application optimized. Specifically where *Monochamus galloprovincialis* is the vector, sampling should include the canopy. Cutting debris should be monitored. Asymptomatic trees should be monitored and, in case of findings of PWN-infected trees in their vicinity, cut down. Trees suffering from other pests and diseases and trees affected by forest fires should equally be cut down. Modelling prediction should be used to target monitoring. Early warning systems are needed including rapid and sensitive detection techniques;
  - c. It should be ensured that sampling and laboratory capacity for in particular rapid and efficient diagnosis is not a limiting factor in the PWN management strategy;
  - d. For eradication and containment rapid cut down and treatment of infested/non healthy trees (immediately during flying season and outside the flying season, at the latest before next flying season) is

## FINAL REPORT OF SEMINAR

- critical<sup>1</sup>. Clear-cut belts and clear cuts around infested trees should be considered as particularly effective to stop natural PWN spread, respectively, remove infestations<sup>2</sup>. The radius of cutting all host tree species around infected trees should be reconsidered. Insecticide spraying was shown in PWN infested countries to be an effective means of control. Biological control should be seen as a means to reduce infestation pressure of the vector, not to eliminate the pest;
- e. Risks from WPM and dunnage made from infected trees should be mitigated. Heat treatment (HT) facilities should be certified and audited; the capacity for HT in Portugal should be increased so as to meet the needs;
  - f. The choice of species of reforestation specifically with non-host species should be considered, and resistance breeding programmes initiated.

10. Following the extensive research conducted in the EU in the past decade, remaining research needs should be addressed such as early detection methods for asymptomatic trees; more details on vector flight distances; improved regional prediction of PWN wilt expression; new biological control methods; and the role of symbiotic bacteria. Continuity of long-term PWN research is important, additional to short-term needs. Appropriate national and international collaborative research programmes should be developed. Developing and sharing the best laboratory methods is necessary.

11. Field training of staff and persons from other involved organisations is very important for awareness and effective action.

12. Communication is indispensable for awareness, surveillance, notification and cooperation, and should among others involve the general public, forest owners, traders and importers, and customs officials.

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<sup>1</sup> This is the position taken by the experts, however, Portugal objected against this statement because of difficulties in implementation.

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## Annex 1

Mr. Jose Fernandes: Interim conclusions from first day session on PWN impact and control in Asia, North America and Scandinavia.

## Annex 2

Mr. Robert Baayen: Interim conclusions from first day session on scientific advise for PWN management.

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