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COMMISSION STAFF WORKING DOCUMENT

**concerning the control of pine wood nematode in the forestry sector in the European
Union**

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Introduction

The purpose of this document is:

- to provide an overview of ongoing EU activities related to the control of pine wood nematode;
- to initiate a discussion on these activities and to identify possible areas for further action and the types of possible actions.

Therefore, this working paper has to be considered as a basis for consultation and discussion with the experts of the Member States, the European scientific bodies and European stakeholders. It does not represent an official position of the Commission and the ideas it contains do not prejudge the form and content of any future Commission initiatives.

This staff working document identified 12 issues relevant in the context of the control of the spread of PWN in the EU and for which further discussion or activity are needed.

Background

Importance of pine wood nematode

- The pine wood nematode (PWN – *Bursaphelenchus xylophilus*) is a microscopic worm which is usually transmitted by a vector insect, *Monochamus* spp., which is naturally present in continental Europe. PWN is native to North America, where the native pine trees are generally resistant. Most European pine species are highly susceptible and entry and spread of the pest in Europe could have devastating effects for European pine forests (natural environment conservation, forestry). PWN has caused great damage in Asiatic countries to which it was introduced and at world level is seen as a very important pest. In the EU territory, coniferous forests cover about 81 million ha. Mainly the forests in the southern parts of the EU are considered to be at serious risk for tree mortality if PWN would be widespread. Moreover, PWN freedom is an important phytosanitary requirement in the international trade of coniferous wood. If it would be widespread throughout Europe, it could also have an economic impact for all EU Member States. As a consequence of climate change, the pine forests in northern Member States may in longer term be also at risk of tree mortality.
- For the Community, PWN is considered as a harmful organism with quarantine status for most species of coniferous plants and for all species of coniferous wood originating outside Europe. As far as the status of PWN within the Community is concerned, it is known to be present within the territory of continental Portugal since 1999 and is considered absent from the rest of the EU territory. This is confirmed by

yearly large scale monitoring campaigns throughout the EU during the last 10 years. Since 2000, strict emergency measures have been in place in Portugal to control this nematode. So far, in European territory outside Portugal, PWN has only been detected in one pine tree. This concerned a finding in 2008 in Spain. Strict quarantine measures have immediately been implemented by Spain and all subsequent monitoring data are indicating so far that the eradication action is successful. At the border of Portugal and Spain, a 20-km wide buffer zone is maintained on Portuguese territory, which is specifically surveyed and for which specific measures are in force. Since mid 2008, when it became clear that PWN was spread outside the original outbreak site around Setubal, the policy had to be reviewed several times in order to achieve the appropriate level of protection against a further PWN spread at short term.

- Apart from the natural spread by the vector insect *Monochamus* spp., PWN may be disseminated with coniferous plants and wood. Therefore the import and movement of susceptible plants and wood consignments originating in infested countries is regulated. In addition to the risk for spreading PWN through the transport of consignments of wood, it can also spread through the use of wood as packaging material in the transport of goods of all kinds. The latter constitutes an important risk for spreading pests and diseases like PWN because of the enormous volume of susceptible wood packaging material (pallets, crates, dunnage...) in international trade without being referred to on the commodity documents and because of its multiple use. In order to cover the risk of wood related harmful organisms more generally, the International Plant Protection Convention (IPPC) developed International Standard for Phytosanitary Measures No. 15 (ISPM 15). Under this standard, all wood packaging material in international trade - originating from any type of tree species and from anywhere worldwide – foresees that this material should have undergone a specific treatment (heat treatment or fumigation) and marked with the ISPM 15 mark. This standard has an important impact on global trade because wood packaging material is used for shipments of a large range of commodities. Most countries worldwide, including the EU, have implemented ISPM 15.

Situation of pine wood nematode in Portugal

- PWN was first detected in Portugal in 1999 in the Setubal region. Community emergency measures were taken since 2000 to eradicate the pest or as a minimum stop it from spreading. The measures were regularly updated (Decision 2006/133/EC as amended).
- When eradication was not being obtained, it was attempted to contain the pest to the Setubal area by a major effort including the felling of about 1 million trees in a demarcated area (including a 20 km wide buffer zone around the infested zone) in the period 2000-2006 and, since 2007, surrounded by a 3 km wide and 300 km long clear-cut belt. Globally, the Community supported Portugal for the total expenses with approx. 9 million euros.
- Since April 2008, about 119 outbreaks occurred outside the demarcated Setubal area, mainly in the centre and the north of Portugal, in areas that were previously known to be free from PWN. In June 2008, Portugal declared the entire territory of continental

Portugal to be PWN infested. The Commission took supplementary measures to stop the spread of PWN to the rest of Europe. Strict measures, updated several times, are in force in the whole of continental Portugal. The measures aim to stop the spread via the transport of infested wood as well as natural spread. All coniferous trees in poor health have to be felled and processed under safe conditions. All movements of susceptible material, i.e. plants, wood, bark, cutting waste, processing waste and WPM within continental Portugal are subject to strict treatment and control requirements. Exemptions from treatments exist only for local use of the wood as construction timber and for old wood packaging material. The requirements for movements out of Portugal are even stricter: not any exemption is allowed and all treatments must be carried out by specifically and recently authorised processing companies.

Issues to be addressed in the framework of PWN control

1. UPGRADING OF THE EU PEST RISK ANALYSIS FOR PWN

Current situation:

A pest risk analysis (PRA) for PWN in the EU was produced in 1996 by the European and Mediterranean Plant Protection Organisation (EPPO, an intergovernmental organisation with 50 members including all EU Member States) and a group of European experts. Since then, and especially since the detection of PWN in Portugal, a lot of research has been carried out, including in the framework of the EU-funded PHRAME project.

Action:

The existing PRA on PWN, published by EPPO, is being upgraded to take into account the recent scientific information and result in a more accurate risk assessment as well as risk management proposals and would then serve as the main reference document on PWN. EPPO scheduled the finalisation of the revision process by the end of October 2009. It is envisaged to rely on the EPPO update. In case of controversial conclusions related to the EU territory, EFSA could be requested to provide some additional scientific analysis. The new PRA will be used as scientific foundation for Community emergency measures (such as justification for the clear-cut radius required in case of first outbreaks in a free area). Expected timing: end of October 2009 (if EFSA is not consulted) or April 2010 (if EFSA is to be consulted).

2. UPDATING OF THE OFFICIAL STATUS OF PWN FOR THE EU

Current situation:

Until now, the basic plant health Directive 2000/29/EC provides protective measures against PWN in plants/wood from third countries under the chapter "harmful organisms not known to occur in the Community and relevant for the entire Community". Measures against further spread from Portugal into other Member States are only laid down in Decision 2006/133/EC with emergency measures.

Action:

Based on an upgraded PRA and as it became clear from findings in 2008, PWN should now be considered as a pest which is established in one part of the EU territory (Portugal) and which can no longer be eradicated there. Therefore, PWN could be reclassified under the chapter "harmful organisms known to occur in the Community and relevant for the entire Community". It has to be noted that in both cases the introduction into, and spread within all Member States should continue to be prevented if they are present on certain plants or plant products (coniferous plant species and coniferous wood).

3. CREATION OF AN EXPERT SUB-GROUP "HARMFUL ORGANISMS IN FORESTRY"

Current situation:

Currently, there is a Commission expert group "Plant Health Legislation". Technical discussions on PWN were organised in 2003, 2005, 2007 and January 2009 in ad hoc working group meetings.

Under this expert group, a sub-group "Harmful organisms in Forestry" was created during the summer of 2009, replacing the ad hoc working group. The objective of this sub-group is to act, in a transparent and regular way, as a fixed reference group of technical experts which can advise the Commission on pest management issues in the forestry sector. The existing group of scientists, national regulators and one EPPO representative has been broadened with representatives from other Commission DGs, such as DG AGRI, DG ENV, DG ENTR and DG RTD as they are competent, respectively, for the coordination of the Commission Interservice Group on Forestry, the environmental and economic impacts of measures in the forestry sector, and the coordination of research within the Community.

4. TECHNICAL REVIEW OF EXISTING PWN EMERGENCY MEASURES FOR PLANTS AND WOOD

Current situation:

The existing emergency measures, laid down in Decision 2006/133/EC and requiring Member States to take additional measures against the dissemination of PWN as regards areas in Portugal, are based on a Decision from 2000, renewed in 2006 and revised several times in 2008 and 2009. The overall structure includes specific requirements for movements within a demarcated area, as well as separate more restrictive requirements for movements out of such areas, with the ultimate aim to eradicate PWN from Portugal. The most recent amendments provide for a further strengthening of the existing emergency measures, taking into account the continuing interceptions and a report from the Food and Veterinary Office on Portugal. The revised measures impose maximum feasible controls by Portugal, increased checking by MS and improved traceability of all wood packaging material leaving continental Portugal.

Action: The existing measures could be reviewed in the above-referred expert sub-group on Harmful organisms in forestry.

A technical review of the current emergency measures could be considered, based on 3 questions:

- Should the objective of: full eradication of PWN still attainable or should it be considered more appropriate to aim at containment of PWN in some areas of the Community ?
- Is the geographical scope of the measures still the right one?
- Are the current technical measures on the presence and movement of the different types of susceptible material in the demarcated areas appropriate:
 - within infested zones ?
 - within buffer zones ?
 - outside the demarcated areas ?

Expected timing for this review: end 2009 - beginning of 2010

5. NATIONAL ACTION PLANS IN MEMBER STATES WHERE PWN IS PRESENT

Current situation:

Under the current EU provisions, Portugal submits annually by 31 December an updated action plan which is discussed in the Standing Committee on Plant Health. Such annual plan describes how the Member State plans to implement the Community PWN emergency measures in its territory during the coming year. It consists of a monitoring plan (describing the foreseen surveys for the presence of PWN in its territory, at import and concerning movements of regulated materials) and a control plan (describing the local implementation of the legal provisions to be complied with) against PWN. The 2009 plan describes an improved monitoring system for the whole territory with minimum 3000 samples to be taken in 1 year; all host trees in 50 m around new outbreak sites will be felled and in another 100 m radius all susceptible trees will be monitored and sampled. Susceptible wood can be treated in facilities under an authorisation system that is intensively surveyed by at least 45 newly trained inspectors. It additionally describes the Portuguese support to scientific research, to the industry and to forest owners as well as the ongoing awareness campaign. Given the recent PWN outbreak in Spain, an action plan for 2009 was also requested from the Spanish authorities.

Action:

Also in the future, the continuation of such action plans for all PWN demarcated areas in the EU will need to be considered for careful analysis by the Commission and Member States and annual update. Expected timing: annually in December-January.

6. COMMUNITY FINANCIAL SUPPORT FOR MEASURES AGAINST PWN

Current situation:

Community co-financing for plant health expenditures by governments concerning control eradication and containment measures against harmful organisms is foreseen in Council Directive 2000/29/EC, articles 22 and 23. In normal cases the co-financing rate is initially 50% (degressive) with a maximum duration of 4 years. Within the existing legal framework, derogation to that rule (duration as well as co-financing rate) is possible on condition that appropriate justification can be provided for reaching the objective of the measures in the longer timeframe. However, any co-financing shall be of limited duration and degressive over the years.

Between 1997 – the creation of the implementing rules and 2005 – before the major PWN budget increase - the annual expenditure under the budget line for co-financing plant health measures was established to below 1 million € on average. Recently, a co-financing of 8.7 million euro has been approved in 2006 for the Portuguese clear-cut belt in the Setubal region. The financing was found by way of transfer from other budget lines. New PWN "solidarity" requests of Portugal and Spain are quite substantial. Indeed, Portugal is asking to co-finance an additional expenditure of 15 to 19 million € for the clear-cut belt, as well as an estimated expenditure of 21 million € spread over 2008 and 2009 for control measures and heat treatment of coniferous wood and WPM, and an additional co-financing request is expected in 2010 for that purpose. Spain is requesting a co-financing on 3,8 million € to be spent for control measures over the same timeframe. So, apart from the need to co-finance expenditures for outbreaks of other diseases from the same budget line and depending on the years, it appears that the past annual Community budget line for co-financing plant health measures is insufficient to cover for PWN expenditures.

Point for discussion:

A mechanism similar to the Community Animal Health Veterinary legislation could be discussed. However, the financing of that mechanism will be probably difficult to identify, except from economies from other related budget lines and will need to be found during the budgetary procedure each year, taking into account the budgetary availabilities.

The usefulness of the co-financing mechanism has been highlighted in the recent evaluation of the financial aspects of the Community Plant Health Regime.

Do Member States agree that the co-financing mechanism is useful?

Do Member States consider that the current system of co-financing of plant health expenditures is sustainable?

Expected timing for reflection: before end 2011.

7. TREATMENT OF ALL WOOD PACKAGING MATERIAL IN THE EU

Current situation:

Current EU import requirements include the implementation of the International Standard for Phytosanitary Measures No. 15 ("ISPM15") for all wood packaging material entering the Community. The same applies to all movements of wood packaging material from continental Portugal to the rest of the EU or third countries. The latter is not only applicable to the material originating in continental Portugal as well as - from 1 January 2010 onwards - originating in any other part of the EU and which was moved into Portugal.

Action: Technical discussions to be initiated on the need and feasibility to apply ISPM 15 for intra-Community trade.

A general reflection on the EU requirements for intra-community movements of all wood packaging material could be organised. The possible extension of ISPM No.15 to the entire EU could be discussed, including its significant economic and environmental implications (need for investments in heat treatment capacity, potential disruptions in the supply chain, increased energy usage and CO₂ emissions)¹. In view of the magnitude of the potential impacts of such legislation, an impact assessment (cost/benefit analysis) might be necessary. Expected timing for reflection: 2010.

8. DEVELOPMENT OF AN UPGRADED SURVEILLANCE PLAN FOR CONTROL AT IMPORT, INTRACOMMUNITY TRADE AND COMMUNITY FORESTS

Current situation:

Since 2000, all Member States carry out an annual monitoring of coniferous forests within their territory, based on a survey protocol from 2000. For example, in 2007 (i.e. before the deterioration of the Portuguese PWN situation) 4298 samples were analysed from free areas throughout the Community (26 Member States; excluding Portugal) and 4935 samples from the demarcated area in Setubal. Imported consignments of susceptible wood and plants are inspected systematically and incoming wood packaging material is controlled randomly. Member States report the results of the official annual surveys for PWN. Moreover, since the latest amendment of the emergency measures, Member States have to carry out now monitoring of intra-community trade, especially for consignments from Portugal.

¹ According to the Fédération Européenne des Fabricants de Palletes et Emballages en Bois (FEFPEB), a total of 3 billion pallets is currently circulating in Europe. The life time of pallets varies from less than one year (single-use one-way pallets of poor quality) to 10 years (high-quality pallets in use in pallet pools or owned by distributors/transporters). The price of pallets is in the range of €8 to €15. Annually, 450 million new pallets are produced. If a legal obligation would be introduced to treat and mark all newly produced pallets, and using the existing heat treatment capacity in the EU, a transitional period of several years will presumably be needed before all pallets circulating in the EU can be treated and marked. No call-back system exists for pallets that are currently in circulation. European trade can be severely affected if provisions for introduction of ISPM No. 15 for all pallets are introduced that can not yet be met by the industry.

Action:

On the basis on the existing EU survey protocol and international guidance documents, the expert sub-group "harmful organisms in forestry" could be tasked to elaborate an overall surveillance plan with qualitative and quantitative monitoring guidelines for (1) susceptible forests, (2) imports and (3) intra-community trade, including wood packaging material. Focus for the last two points could be on goods originating in infested third countries as well as PWN demarcated areas within the EU. A regular collection of all monitoring results, positive as well as negative, and analysis could be considered for discussion in the Standing Committee. Focus could be on goods originating in infested third countries as well as PWN demarcated areas within the EU. Expected timing: end of 2009 – first quarter 2010 (on-going).

9. ORGANISATION OF SURVEILLANCE TRAINING FOR INSPECTORS

Current situation:

No specific harmonised training on forestry pests has been organised so far. However, this would be a useful tool to increase reliable monitoring data.

Action:

In the framework of the 'Better training for safer food' programme, 3-day training sessions will be organised for national inspectors on the surveillance of forests/woodlands and traded goods. Expected timing: 2nd semester 2009 for Portugal and Spain; from 2010 onwards for all Member States.

10. RESEARCH ON PWN

Current situation:

Research on PWN has been carried out by several Member States, in particular by Portugal. Since the late 90', constant and substantial Community support from DG Research has been given to support directly or indirectly research on PWN, accounting for a total of almost 20 million euros². Such research is essential for updating the Pest Risk Analysis (point 1) and for defining appropriate control measures. The need for long-term and short-term research has been highlighted in the PWN seminar in Lisbon on 7-9 October 2008, as well as the importance of collaborative research programmes and the development and sharing of the best laboratory methods. Particular attention is needed for the biology and control of PWN, flight distances of the vector, wood treatment specifications, early detection methods for asymptomatic trees, improved regional prediction of PWN wilt expression and impact studies.

Action:

In the above-mentioned context, research needs and options for increased Community funding of fundamental and applied research on PWN were discussed with DG Research, which invited the coordinators of existing EU-funded plant health research programmes (PRATIQUE, QBOL, QDETECT, EUPHRESKO and ISEFOR) to examine their potential contribution to PWN research and to improve coordination and integration of their efforts.

Beyond the substantial ongoing effort mentioned above, an additional envelope of 3 million € was earmarked for PWN research under FP7 for 2010. Timing: Applicants are invited to submit research proposals by early 2010 and the new project is expected to start by the end of 2010.

² e.g. (i) a 3.1 million € project (**PHRAME** – 'Development of Improved PRA Techniques for Quarantine Organisms Using PWN, *Bursaphelenchus xylophilus*, in Portugal as a Model'), between 2003 and 2006, intended to develop improved pest risk analysis techniques; (ii) project **PORT CHECK** ('Development of Generic On Site Molecular Diagnostics for EU Quarantine Pests and Pathogens'), ca. 1.5 million € of EC contribution, between 2003 and 2007, aiming to deliver tools and procedures to allow Plant Health Services to perform molecular diagnostic assays; (iii) project **PRATIQUE** ('Enhancements of Pest Risk Analysis Techniques'), ca. 3 million € of EC contribution, March 2008 to June 2011, to address the major challenges for pest risk analysis (PRA), including for PWN; (iv) project **QBOL** ('Development of a new diagnostic tool using DNA barcoding to identify quarantine organisms in support of plant health'), ca. 3 million € of EC contribution, March 2009 to March 2012, to develop accurate identification tools for plant pathogens and pests, including PWN; (v) project **Q-DETECT** ('Developing Quarantine Pest Detection Methods for Use by National Plant Protection Organizations (NPPO) and Inspection Services'), ca. 3 million € of EC contribution, not yet started, to develop detection methods for high priority target pests and pathogens for the EU such as PWN; (vi) project **ISEFOR** (Increasing Sustainability of European Forests: Modelling for Security Against Invasive Pests and Pathogens under Climate Change), not yet started, with PWN as a key focus. And beside the above-mentioned typical EU-FP projects, (vii) **EUPHRESKO** is an ERA-NET supported by DG Research, ca. 1 million € of EC contribution, May 2006 to May 2010, drawing together national research programmes to better serve the needs of EU phytosanitary science and policy.

11. COMPLEMENTARITIES BETWEEN FOREST MANAGEMENT AND PLANT HEALTH REGIME

Current situation:

Originally, the Community plant health regime was developed mainly to protect agricultural, horticultural and ornamental crops. More recently, several harmful organisms have been found to be a threat for plant nurseries as well as for forestry. However, limited data are available on the impact of the plant health regime on forestry in Europe. A limited impact assessment of the ban / no ban scenario for regulating PWN susceptible products from Portugal was carried out in December 2008.

Action:

DG ENV will call for a study by a contractor to evaluate the impact of pests and diseases in a forestry environment and to reflect on appropriate actions to safeguard the forests on mid and long term perspective. The study is not only focussed on PWN, but it will be addressed as a reference case. SANCO will actively contribute through participation in the steering committee. Expected timing: 2010-2011.

12. REVIEW OF PLANT HEALTH LEGISLATION

Current situation:

The existing Community plant health regime, Council Directive 2000/29/EC, dates back to an original conception of 1977, which was several times updated; the last basic revision dates back to 2002. On 21 November 2008, the Council supported the need for a comprehensive evaluation of the Community Plant Health Regime and invited the Commission to develop, based on the outcome of the evaluation, a Community plant health strategy.

Action:

In 2009, the Commission has launched a general evaluation of the plant health regime. The final report is due in May 2010. This evaluation will form the basis for a reflection on the possible development of a new plant health strategy.

In the framework of this evaluation of the Community plant health regime, the current plant health policy towards European forests is being evaluated. Over the last years, a greater focus has been given to forest pests. On the basis of the PWN case, it could be evaluated in how far the existing tools are appropriate to achieve the plant health objectives, i.e. to protect the Community plant production sector as well as the environment against harmful organisms. The outcome should be used to develop a long term strategy for forest plant health in Europe. Expected timing for finalising the new overall plant health strategy: end 2011.