

Commodity-specific phytosanitary measures
Mesures phytosanitaires par marchandise**PM 8/6 (1) *Betula*****Specific scope**

The purpose of the EPPO Standard on *Betula* is to recommend to EPPO Member Governments the phytosanitary measures which they should use or require for *Betula* plants and plant products moving in international trade to prevent the introduction and spread of quarantine pests. Some of these recommendations are addressed to all EPPO Member Governments, others are addressed only to countries considered to face a certain level of risk from the introduction and spread of the regulated pests concerned. All these recommendations were derived from:

- EPPO Standards PM 1/2 (EPPO A1 and A2 Lists) and the former EPPO Standards PM 2 (pest-specific phytosanitary measures), or
- Pest Risk Analysis (PRA) carried out or reviewed by EPPO, or
- the Working Party on Phytosanitary Regulations.

For wood packaging material, recommendations are based on ISPM 15 *Regulation of wood packaging material in international trade*.

Specific approval and amendment

First approved in 2017-09.

1. Plants and commodities concerned

This Standard relates to all plants and plant products of the genus *Betula*.

The Standard concerns the commodities that are regularly traded, i.e. wood (including untreated wood in manufactured articles), bark, plants for planting and cut branches. Wood packaging, although not a commodity *per se*, is also included. Plants for planting are considered in general at the genus level. *Betula* wood may be traded as pure or mixed consignments, for example wood chips obtained from woody plants of different genera. Since the genus should be indicated on the phytosanitary certificate every genus present should be specified in the case of mixed consignments. Such consignments should satisfy all the requirements for every genus present.

1.1 Commodities concerned

Wood (as a commodity class): commodities such as round wood, sawn wood, wood chips and wood residue, with or without bark excluding wood packaging material, processed wood material and bamboo products (ISPM 5).

Round wood: wood not sawn longitudinally, carrying its natural rounded surface, with or without bark (ISPM 5). Branches of woody plants used for bioenergy

production should be considered under this category of commodities.

Sawn wood: wood sawn longitudinally, with or without its natural rounded surface with or without bark (ISPM 5).

Processed wood material: products that are a composite of wood constructed using glue, heat and pressure, or any combination thereof (ISPM 5).

Manufactured wood items: to be added when defined under the ISPM on international movement of wood products and handicrafts made of wood (under development).

Harvesting residues: wood material consisting of any parts of trees left on the site after round wood harvesting (EPPO Technical Document no. 1071).

Processing wood residues: parts of wood and bark that are left after the process of transforming round wood into sawn wood and further transformation of sawn wood (EPPO Technical Document no. 1071).

Wood chips: wood with or without bark in the form of pieces with a definable particle size produced by mechanical treatment with sharp tools (EPPO Technical Document no. 1071).

Hogwood: wood with or without bark in the form of pieces of varying particle size and shape, produced by crushing with blunt tools such as rollers, hammers or flails (EPPO Technical Document no. 1071).

Post-consumer scrap wood: a wide variety of wood material from ex-commercial, industrial and domestic use made available for recycling (EPPO Technical Document no. 1071).

Wood packaging material: wood or wood products (excluding paper products) used in supporting, protecting or carrying a commodity (includes dunnage) (ISPM 5). Because this is not a commodity *per se*, it is separated from wood. It includes wooden structures that accompany traded commodities such as pallets, boxes, crates, spools, dunnage (maintain as in ISPM 15).

Cut branches (including coppiced stems): defined in ISPM 5 as ‘a commodity class for fresh parts of plants intended for decorative use and not for planting’.

Bark (as a commodity): bark separated from wood (ISPM 5). Bark may contain pieces of wood with it.

Plants for planting: plants intended to remain planted, to be planted or replanted (ISPM 5). This commodity type includes nursery plants such as seedlings (1–5 years old, used for reforestation) and seeds. It also includes quite large trees (< 20 years) for transplanting to gardens, amenity plantings or architectural plantings and includes naturally or artificially dwarfed plants (bonsais). The risks of transporting regulated pests are different for trees of different ages.

1.2 Other definitions

Bark: the layer of a woody trunk, branch or root outside the cambium (ISPM 5).

Bark-free wood: wood from which all bark, except ingrown bark around knots and bark pockets between rings of annual growth, has been removed (ISPM 5).

Debarked wood: wood that has been subjected to any process that results in the removal of bark (debarked wood is not necessarily bark-free wood) (ISPM 5).

Debarking: a process designed to remove a large majority of the bark, and thereby producing debarked wood.

Heat treatment: the process in which a commodity is heated until it reaches a minimum temperature for a minimum period of time according to an official technical specification (ISPM 5).

2. Pests of *Betula* recommended for regulation

This Standard relates to the EPPO A1 and A2 pests for which *Betula* can be a significant pathway of introduction (EPPO Standard PM 1/2), including pests which EPPO recommends for regulation. The phytosanitary measures described in the Standard are primarily aimed at preventing the introduction and spread of these specific pests in the EPPO region. Details on these pests can be found on the EPPO website (<http://www.eppo.org>) or in *Quarantine Pests for Europe* (EPPO/CABI, 1997): see *Bulletin OEPP/EPPO Bulletin* for more recent additions to the lists.

2.1 Pests of *Betula*

A1 pests

Insects

Agrilus anxius
Anoplophora glabripennis
Choristoneura conflictana
Choristoneura rosaceana
Malacosoma americanum
Malacosoma disstria
Oemona hirta

A2 pests

Insects

Aeolesthes sarta
Anoplophora chinensis
Lepidosaphes ussuriensis
Lopholeucaspis japonica
Lymantria mathura
Popillia japonica
Quadraspidiotus perniciosus
Trichoferus campestris
Xylotrechus namanganensis

Fungi and fungus-like organisms

Phytophthora ramorum

The above lists cover all known pests which are recommended for regulation by EPPO and for which *Betula* commodities are significant potential pathways of introduction. They do not necessarily cover all regulated pests which have been recorded on *Betula*. New emerging pest situations, based on PRA, may lead to addition of pests to the Standard.

3. Commodity-specific phytosanitary requirements for *Betula*

Each pest recommended for regulation has been considered by the EPPO Working Party on Phytosanitary Regulations and pest-specific phytosanitary requirements (PAPRs) were recommended (EPPO Standards PM 2, withdrawn in 2006). These former pest-specific requirements have been analysed and their content reviewed and rearranged into recommended commodity-specific requirements for *Betula*. Phytosanitary measures for recently EPPO listed (A1 or A2) pests were taken from the pest risk management part of the PRA performed by the EPPO Expert Working Groups and rearranged in a consistent way by the EPPO Panel on Quarantine Pests for Forestry.

The commodity-specific requirements also include general measures for polyphagous, contaminating and other non-indigenous pests which may be associated with consignments of *Betula*.

In many places, the commodity-specific requirements refer to specific phytosanitary procedures. These are described in detail in separate EPPO Standards or in appendices to this Standard.

Normally, it is recommended that the requirements fulfilled by the exporting countries and stated on the phytosanitary certificate are accepted by the importing country. However, in certain cases where the trade is new, there remains a degree of uncertainty about the adequacy of the application of the measures, which can only be resolved by following appropriate transitional procedures. These procedures should be developed in the framework of transitional arrangements

(EPPO Standard under development). Cases where such special procedures may apply are specifically identified in this section, and the corresponding requirements are preceded by the following phrasing: ‘subject, where appropriate, to special procedures under transitional arrangements’.

3.1 Regulation of *Betula* pests

3.1.1 A1 pests

All EPPO countries are recommended to regulate as quarantine pests the *Betula* pests in the EPPO A1 List (see Section 2).

3.1.2 A2 pests

For EPPO A2 pests recommended for regulation (see Section 2), EPPO countries where a given A2 pest does not

occur, or where it is not widely distributed, are recommended to regulate it as a quarantine pest. If they do, they are recommended to make the requirements specified for this pest.

4. List of recommended phytosanitary measures

4.1 Requirements for *Betula*

In the following:

When ‘OR’ or ‘AND’ are written in capitals this separates 2 sections of options.

When ‘or’ or ‘and’ are not in capitals they separate only one option from another.

PC is ‘phytosanitary certificate’ and RC is ‘re-export phytosanitary certificate’.

Plants for planting (other than seeds) of <i>Betula</i>	PC and, if necessary, RC
Plants for planting of <i>Betula</i> other than seeds and plants in tissue culture	Dormant, clean (i.e. free from plant debris) and free from leaves, flowers and seeds Grown in nurseries Inspected prior to export and found free from bacteria, viruses and virus-like organisms, or subjected to appropriate treatment to eliminate such organisms
Plants for planting of <i>Betula</i> in tissue culture	Grown in approved tissue culture facilities in sterile conditions The plants and growing medium inspected prior to export and found free from bacteria, viruses and virus-like organisms, or subjected to appropriate treatment to eliminate such organisms
Plants for planting of <i>Betula</i> with soil and growing medium attached or associated	Grown according to EPPO Standard PM 3/54
Plants for planting (except seeds) of <i>Betula</i> originating in countries where any of the following pests occur: <i>Agrilus anxius</i> <i>Aeolesthes sarta</i> <i>Anoplophora chinensis</i> <i>Anoplophora glabripennis</i> <i>Choristoneura confictana</i> <i>Choristoneura rosaceana</i> <i>Lepidosaphes ussuriensis</i> <i>Lopholeucaspis japonica</i> <i>Lymantria mathura</i> <i>Malacosoma americanum</i> <i>Malacosoma disstria</i> <i>Oemona hirta</i> <i>Phytophthora ramorum</i> <i>Popillia japonica</i> <i>Quadraspidiotus perniciosus</i> <i>Trichoferus campestris</i> <i>Xylotrechus namanganensis</i>	Free from the relevant pests listed in the left column
Plants for planting (except seeds) of <i>Betula</i> originating in countries where any of the following pests occur: <i>Aeolesthes sarta</i> <i>Anoplophora chinensis</i> <i>Anoplophora glabripennis</i> <i>Trichoferus campestris</i> <i>Xylotrechus namanganensis</i>	Pest-free area for relevant pests listed in the left column AND Transported outside of the corresponding flight periods or Not transported through areas infested with the relevant pest or Transported closed, to prevent infestation

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Table. Continued

Plants for planting (except seeds) of <i>Betula</i> originating in countries where <i>Agrilus anxius</i> occurs	Pest-free area for <i>Agrilus anxius</i> or Grown according to EPPO Standard PM 5/8 or Plants with stems below 2 cm diameter, and scions below 1 cm diameter AND Transported outside of <i>Agrilus anxius</i> flight period or Not transported through areas infested with <i>Agrilus anxius</i> or Transported closed, to prevent infestation
Plants for planting (except seeds) of <i>Betula</i> originating in countries where <i>Choristoneura conflictana</i> or <i>Choristoneura rosaceana</i> occurs	Pest-free area for <i>Choristoneura conflictana</i> and <i>Choristoneura rosaceana</i> or Grown according to EPPO Standard PM 5/8 or Appropriate fumigation, details to be specified on the PC AND Transported outside of <i>Choristoneura conflictana</i> and <i>Choristoneura rosaceana</i> flight periods or Not transported through areas infested with <i>Choristoneura conflictana</i> and <i>Choristoneura rosaceana</i> or Transported closed, to prevent infestation
Plants for planting (except seeds) of <i>Betula</i> originating in countries where <i>Lepidosaphes ussuriensis</i> or <i>Lopholeucaspis japonica</i> occur	Pest-free area for <i>Lepidosaphes ussuriensis</i> and <i>Lopholeucaspis japonica</i> or Place of production freedom (including throughout the previous season) for <i>Lepidosaphes ussuriensis</i> and <i>Lopholeucaspis japonica</i>
Plants for planting (except seeds) of <i>Betula</i> originating in countries where <i>Lymantria mathura</i> occurs	Pest-free area for <i>Lymantria mathura</i> or Grown according to EPPO Standard PM 5/8 or Lifted, dispatched and imported outside of <i>Lymantria mathura</i> flight period (in winter) or Appropriate fumigation, details to be specified on the PC AND Transported outside of <i>Lymantria mathura</i> flight period or Not transported through areas infested with <i>Lymantria mathura</i> or Transported closed, to prevent infestation
Plants for planting (except seeds) of <i>Betula</i> originating in countries where <i>Malacosoma americanum</i> or <i>Malacosoma disstria</i> occurs	Pest-free area for <i>Malacosoma americanum</i> and <i>Malacosoma disstria</i> or Grown according to EPPO Standard PM 5/8 or Appropriate fumigation, details to be specified on the PC AND Transported outside of <i>Malacosoma americanum</i> and <i>Malacosoma disstria</i> flight periods or Not transported through areas infested with <i>Malacosoma americanum</i> and <i>Malacosoma disstria</i> or Transported closed, to prevent infestation

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Plants for planting (except seeds) of <i>Betula</i> originating in countries where <i>Oemona hirta</i> occurs	Pest-free area for <i>Oemona hirta</i> or Pest-free place of production or pest-free production site for <i>Oemona hirta</i> under complete physical protection (comparable to quarantine conditions) with regular inspections of the crop and inspection of plants prior to export or AND Transported outside of <i>Oemona hirta</i> flight period or Not transported through areas infested with <i>Oemona hirta</i> or Transported closed, to prevent infestation
Plants for planting of <i>Betula</i> originating in countries where <i>Phytophthora ramorum</i> is present	Pest-free area for <i>Phytophthora ramorum</i> or Pest-free place of production for <i>Phytophthora ramorum</i> and appropriate buffer zone with regular surveys
Plants for planting (except seeds and plants in tissue culture) of <i>Betula</i> originating in countries where <i>Quadraspidiotus perniciosus</i> occurs	Pest-free area for <i>Quadraspidiotus perniciosus</i> or Field of production found free, with its immediate vicinity, from <i>Quadraspidiotus perniciosus</i> during the last 2 growing seasons or Appropriate fumigation, details to be specified on the PC
Cut branches of <i>Betula</i>	PC and, if necessary, RC
Cut branches of <i>Betula</i> originating in countries where any of the following pests occur: <i>Agrilus anxius</i> <i>Choristoneura conflictana</i> <i>Choristoneura rosaceana</i> <i>Lepidosaphes ussuriensis</i> <i>Lopholeucaspis japonica</i> <i>Lymantria mathura</i> <i>Malacosoma americanum</i> <i>Malacosoma disstria</i> <i>Quadraspidiotus perniciosus</i>	Free from the relevant pests listed in the left column
Cut branches of <i>Betula</i> originating in countries where <i>Agrilus anxius</i> occurs	Pest-free area for <i>Agrilus anxius</i> or Originate from plants grown according to EPPO Standard PM 5/8 or Plants with stems below 2 cm diameter, and scions below 1 cm diameter AND Transported outside of <i>Agrilus anxius</i> flight period or Not transported through areas infested with <i>Agrilus anxius</i> or Transported closed, to prevent infestation

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Cut branches of <i>Betula</i> originating in countries where <i>Choristoneura confliciana</i> or <i>Choristoneura rosaceana</i> occurs	Pest-free area for <i>Choristoneura confliciana</i> and <i>Choristoneura rosaceana</i> or Grown according to EPPO Standard PM 5/8 or Appropriate fumigation, details to be specified on the PC AND Transported outside of <i>Choristoneura confliciana</i> and <i>Choristoneura rosaceana</i> flight periods or Not transported through areas infested with <i>Choristoneura confliciana</i> and <i>Choristoneura rosaceana</i> or Transported closed, to prevent infestation
Cut branches of <i>Betula</i> originating in countries where <i>Lepidosaphes ussuriensis</i> or <i>Lopholeucaspis japonica</i> occur	Pest-free area for <i>Lepidosaphes ussuriensis</i> and <i>Lopholeucaspis japonica</i> or Place of production freedom (including throughout the previous season) for <i>Lepidosaphes ussuriensis</i> and <i>Lopholeucaspis japonica</i>
Cut branches of <i>Betula</i> originating in countries where any of the following pests occur: <i>Lymantria mathura</i> <i>Malacosoma americanum</i> <i>Malacosoma disstria</i>	Pest-free area for relevant pests listed in the left column or From plants grown according to EPPO Standard PM 5/8 or Appropriate fumigation, details to be specified on the PC AND Transported outside of the corresponding flight periods or Not transported through areas infested with the relevant pest or Transported closed, to prevent infestation
Cut branches of <i>Betula</i> originating in countries where <i>Quadraspidiotus perniciosus</i> occurs	Pest-free area for <i>Quadraspidiotus perniciosus</i> or Field of production found free, with its immediate vicinity, from <i>Quadraspidiotus perniciosus</i> during the last 2 growing seasons or Appropriate fumigation, details to be specified on the PC
Wood of <i>Betula</i> (includes manufactured wood items made of untreated wood of <i>Betula</i>)	PC and, if necessary, RC
Wood of <i>Betula</i> originating in countries where any of the following pests occur: <i>Aeolesthes sarta</i> <i>Agrilus anxius</i> <i>Anoplophora chinensis</i> <i>Anoplophora glabripennis</i> <i>Lymantria mathura</i> <i>Oemona hirta</i> <i>Phytophthora ramorum</i> <i>Trichoferus campestris</i> <i>Xylotrechus namanganensis</i>	Free from the relevant pests listed in the left column
Wood of <i>Betula</i> originating in countries where <i>Phytophthora ramorum</i> is present	Pest-free area for <i>Phytophthora ramorum</i>

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Table. Continued

Wood (except harvesting wood residues, processing wood residues, wood chips and hogwood) of <i>Betula</i> originating in countries where <i>Oemona hirta</i> occurs	Pest-free area for <i>Oemona hirta</i> or Heat treatment according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8 or Appropriate fumigation, details to be specified on the PC or Harvested and imported outside of <i>Oemona hirta</i> flying period (in winter) specified in the import permit and processed before the next <i>Oemona hirta</i> flying period (only in the framework of a bilateral agreement) AND Transported outside of <i>Oemona hirta</i> flight periods or Not transported through areas infested with <i>Oemona hirta</i> or Transported closed, to prevent infestation
Round wood with bark of <i>Betula</i> originating in countries where any of the following pests occur: <i>Aeolesthes sarta</i> <i>Anoplophora chinensis</i> <i>Anoplophora glabripennis</i> <i>Trichoferus campestris</i> <i>Xylotrechus namanganensis</i>	Pest-free area for relevant pests listed in the left column or Debarking and heat treatment according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8 AND Transported outside of the corresponding flight periods or Not transported through areas infested with the relevant pest or Transported closed, to prevent infestation
Wood with or without bark of <i>Betula</i> originating in countries where <i>Agrilus anxius</i> occurs	Pest-free area for <i>Agrilus anxius</i> or Heat treatment according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8 or Storage in the exporting country for at least 2 years or Under a specific programme agreed and monitored by the NPPO of the importing country, harvested and imported outside of the potential <i>Agrilus anxius</i> flying period (in winter) specified in the import permit and processed before the next <i>Agrilus anxius</i> flying period AND Transported outside of <i>Agrilus anxius</i> flight periods or Not transported through areas infested with <i>Agrilus anxius</i> or Transported closed, to prevent infestation OR Removal of outer sapwood to a depth of at least 3.5 cm

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Table. Continued

Round wood with bark of <i>Betula</i> originating in countries where <i>Lymantria mathura</i> occurs	Pest-free area for <i>Lymantria mathura</i> or Debarking or Appropriate fumigation, details to be specified on the PC or Heat treatment according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8 AND Transported outside of <i>Lymantria mathura</i> flight period or Not transported through areas infested with <i>Lymantria mathura</i> or Transported closed, to prevent infestation
Sawn wood without bark of <i>Betula</i> originating in countries where any of the following pests occur: <i>Aeolesthes sarta</i> <i>Anoplophora chinensis</i> <i>Anoplophora glabripennis</i> <i>Trichoferus campestris</i> <i>Xylotrechus namanganensis</i>	Pest-free area for relevant pests listed in the left column or Heat treated according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8
Wood chips and hogwood of <i>Betula</i> originating in countries where <i>Agrilus anxius</i> occurs	Heat treated according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8 or Storage in the exporting country for at least 1 year or Fumigated with appropriate fumigant or Under a specific programme agreed and monitored by the NPPO of the importing country, harvested and imported outside of the potential <i>Agrilus anxius</i> flying period (in winter) specified in the import permit and processed before the next <i>Agrilus anxius</i> flying period AND Transported outside of <i>Agrilus anxius</i> flight periods or Not transported through areas infested with <i>Agrilus anxius</i> or Transported closed, to prevent infestation
Harvesting wood residues, processing wood residues, wood chips and hogwood of <i>Betula</i> originating in countries where <i>Oemona hirta</i> occurs	Pest-free area for <i>Oemona hirta</i> or Heat treated according to EPPO Standard PM 10/6 or Chipped to pieces of less than 2.5 cm in any dimension or to 1.5 cm in 2 dimensions immediately prior to despatch or Appropriate fumigation, details to be specified on the PC or Under a specific programme agreed and monitored by the NPPO of the importing country, harvested and imported outside of the potential <i>Oemona hirta</i> flying period (in winter) specified in the import permit and processed before the next <i>Oemona hirta</i> flying period AND Transported outside of <i>Oemona hirta</i> flight period or Not transported through areas infested with <i>Oemona hirta</i> or Transported closed, to prevent infestation

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Table. Continued

Packaging wood of <i>Betula</i>	Requirements of ISPM 15
Bark of <i>Betula</i>	PC and, if necessary, RC
Bark of <i>Betula</i> originating in countries where <i>Agrilus anxius</i> is present	Pest-free area for <i>Agrilus anxius</i> or Harvested, dispatched and imported outside of <i>Agrilus anxius</i> flight period (in winter) or Appropriate fumigation, details to be specified on the PC AND Transported outside of <i>Lymantria mathura</i> flight period or Not transported through areas infested with <i>Lymantria mathura</i> or Transported closed, to prevent infestation OR Free from wood
Bark of <i>Betula</i> originating in countries where <i>Lymantria mathura</i> is present	Pest-free area for <i>Lymantria mathura</i> or Harvested, dispatched and imported outside of <i>Lymantria mathura</i> flight period (in winter) or Appropriate fumigation, details to be specified on the PC AND Transported outside of <i>Lymantria mathura</i> flight period or Not transported through areas infested with <i>Lymantria mathura</i> or Transported closed, to prevent infestation

5. List of associated Standards

It is proposed that individual phytosanitary procedures would be maintained as separate EPPO Standards, but that

they should be part of a package that will always accompany the forestry standard when approved.

The following Standards are of relevance:

EPPO Standards PM 3: Phytosanitary Procedures

PM 3/29 *General export inspection procedure for glasshouse and nursery enterprises*

PM 3/54 *Growing plants in growing medium prior to export*

PM 3/60 *Testing growing medium and plants in growing medium*

EPPO Standards PM 5: Pest Risk Analysis

PM 5/8 *Guidelines on the phytosanitary measure 'Plants grown under complete physical isolation'*

EPPO Standards PM 10: Phytosanitary Treatments

PM 10/6 *Heat treatment of wood to control insects and wood-borne nematodes*

PM 10/8 *Disinfestation of wood with ionizing radiation*

International Standards for Phytosanitary Measures

ISPM 4 *Requirements for the establishment of pest free areas*, 1996. FAO, Rome

ISPM 5 *Glossary of phytosanitary terms*, 2015. FAO, Rome

ISPM 10 *Requirements for the establishment of pest free places of production and pest free production sites*, 1999. FAO, Rome

ISPM 15 *Regulation of wood packaging material in international trade*, 2013. FAO, Rome

Other documents referred to:

EPPO Technical Document no. 1071, *EPPO Study on wood commodities other than round wood, sawn wood and manufactured items*, 2015. EPPO, Paris (https://www.eppo.int/PUBLICATIONS/TD-1071_EPPO_Study_on_wood_commodities.pdf)

EPPO PRAs: https://www.eppo.int/QUARANTINE/Pest_Risk_Analysis/PRA_intro.htm