EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ЕВРОПЕЙСКАЯ И СРЕДИЗЕМНОМОРСКАЯ ОРГАНИЗАЦИЯ ПО КАРАНТИНУ И ЗАЩИТЕ РАСТЕНИЙ
ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES

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PPM Point 8.3

Report of a Pest Risk Assessment

This summary presents the main features of a pest risk assessment which has been conducted on the pest, according to EPPO Standard PP 5/3(1) Pest Risk Assessment Scheme.

Pest: *Sirex ermak*

PRA area: Non-Asian part of the EPPO region

Assessor: EPPO Panel on Quarantine Pests for Forestry

Date: October, 2003

1. INITIATION

1.1 Reason for doing PRA: Study of the risk of forest pests occurring on the territory of the former USSR for the western part of the EPPO region

1.2. Taxonomic position of pest: *Sirex ermak* Semenov-Tian-Shanskii (Hymenoptera: *Siricidae*)

2. PROBABILITY OF INTRODUCTION

2.1 Entry

2.1.1 Geographical distribution:

EPPO region: Russia (All Siberia, Transbaikalia and the Far East including Sakhalin island).
Europe: Absent
Asia: Russia (All Siberia, Transbaikalia and the Far East including Sakhalin island)
EU: Absent
North America: Absent
Central America & Caribbean: Absent
South America: Absent
Oceania: Absent
S. ermak is probably spreading to the west because it was found in the Western Siberia only in late 1950-ths, whereas previously it was not observed there. It is found both in valleys and mountains up to an altitude of 2000 m.

2.1.2 Major host plants:

S. ermak may damage several species of *Larix, Picea, Pinus (*including *P. sibirica), Abies* and other coniferous. Its preferred hosts in Siberia are the most common Siberian coniferous *Larix gmelinii (= L. dahurica)* and *Larix sibirica.*

2.1.3 Which pathway(s) is the pest likely to be introduced on:

Because *S. ermak* may be hidden deep in the wood during a long period of time (2-year life cycle) and therefore difficult to detect, it may be easily transported with untreated wood products moving in trade. The pest may also be carried as a hitchhiker on planting material.
In decreasing order of risk, main pathways for *L. ussuriensis* may be:

1. Wood
2. Packaging wood material

2.2 Establishment

2.2.1 Crops at risk in the PRA area:

Larix, Picea, Pinus, Abies and other coniferous. The biggest risk exists for forests and mountain-protecting plantations.

2.2.2 Climatic similarity of present distribution with PRA area (or parts thereof):

Because of the large range of host plants and climatic conditions in its area of origin and present distribution, it is likely to establish in almost all coniferous forests of the EPPO region where its host plants are important forest trees.

2.2.3 Aspects of the pest's biology that would favour establishment:

The pest is polyphagous and genetically adaptable.

2.2.4 Characteristics (other than climatic) of the PRA area that would favour establishment:

Host plants are widely distributed within the PRA area. Suitable ecological niches are available throughout the PRA area.

2.2.5 Which part of the PRA area is the endangered area:

The endangered part of the PRA area covers almost all coniferous forests of the EPPO region.

3. ECONOMIC IMPACT ASSESSMENT

3.1 Describe damage to potential hosts in PRA area:

S. ermak attacks mainly stressed (usually after 3 – 4 years of stress) but also healthy trees (or healthy trees with stressed parts of trunks) of different ages as well as cut trees and wood with bark. Even in cases when it does not kill trees, the infestation results in significant delays of sprouting, advanced leaf shedding, loss of vigour and of wood marketability (because of dense and large galleries made by the larger larvae deep in the wood). At the same time the pest infests trees with spores of fungi (*Basidiomycetes*), which are usually present in a special bag at the base of the female ovipositor.

3.2 How much economic impact does the pest have in its present distribution:

S. ermak is an important pest of coniferous trees in Siberia and the Far East. The rate of infested trees in the forest may reach 50% in three years after the first attack. 2 or 3 years after the first attack, wood becomes unusable because of fungi infestation. *S. ermak* often attacks forests after defoliation by *Dendrolimus sibiricus*, often causing their death. A significant number of pests attacks the same tree and develops inside wood during 2 years causing the tree death during 2 or 3 years.

3.3 How much economic impact would the pest have in the PRA area:	Considering the similarity of ecological conditions, the damage in the endangered part of the PRA area could be similar to that in the present area of the pest.

4. CONCLUSIONS OF PRA

4.1 Summarize the major factors that influence the acceptability of the risk from this pest:	This pest • comes from an area with similar climatic conditions to those of the PRA area and could easily establish throughout a large part of it; • can cause serious economic damage there with low possibilities for pest control; • is the pest of many coniferous trees which are important in the PRA area; • can cause important environmental damage.
4.2 Estimate the probability of entry:	high with wood
4.3 Estimate the probability of establishment:	high
4.4 Estimate the potential economic impact:	Medium to high and little possibilities for pest control
4.5 Degree of uncertainty	There is little uncertainty in this assessment
5. OVERALL CONCLUSIONS OF THE ASSESSOR	The endangered part of the PRA area covers almost all coniferous forests of the EPPO region. The pest entry with wood has a high probability. The probability of establishment is high. Its impact within the endangered area would be the direct damage to coniferous forests and mountain-protecting plantations. *S. ermak* is of limited distribution in the EPPO region (Siberia and Far East of Russia). Possibilities of the pest control are limited. Phytosanitary measures could prevent its introduction into the endangered area. *S. ermak* is proposed for the A2 list.