

Assessing the environmental risks of invasive species using ISPM 11 (Rev 1): where to start

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**PRA is a framework for
organizing biological and
other scientific
information that allows
for a management
decision to be made.**

IPPC guidance on Pest Risk Analysis (PRA) – as of 2003

- ISPM No. 2 (1996 – now outdated)
- ISPM No. 11 (2001)
- Supplement No. 1 to ISPM 11
(now shown as ISPM 11 Rev 1, 2003)*
- Supplement No. 2 to ISPM 5 (2003)
(economic significance)



Forest ecosystems

Magnitude of the consequences

Commercial – e.g. loss of profits due to decreased yields or quality.

Non-commercial – e.g. impact on ecosystem stability, loss of keystone species, encroachment of weeds into protected area.

IPPC upcoming guidance on PRA

- Draft ISPM on PRA for RNQP (in country consultation, for 2004 ICPM)
- Supplement No. 2 to ISPM 11 on LMOs (in country consultation, for 2004 ICPM)
- Revision of ISPM No. 3 (2003 for possible 2004 country consultation)
- Revision of ISPM No. 2 (early 2004, country consultation 2005?)

IPPC guidance supporting design of risk management

- ISPM No. 14 (2002)
- Supplement No. 1 to ISPM 5 (2001)
(official control)
- Draft ISPM on Efficacy of Measures (2003, for 2004 country consultation)
- Draft ISPM on Equivalence (2003, for 2004 country consultation)

Design and Focus Efforts Based on Risk

Off shore
activities

Port of entry
measures

Detection

Quarantine

Eradication

Control

How can we effectively
implement this broader
mandate?

Where to start...

1. Start by expanding the taxa and pathways that were not previously considered using PRA.

High risk taxa



- Plants for planting – ornamental, forage, fuelwood, crops (new varieties)
- Other intentionally introduced organisms that will persist in the environment

Footnote: revision of ISPM 3 may cover intentional introductions of all “beneficial” organisms.



and high risk or unmonitored pathways

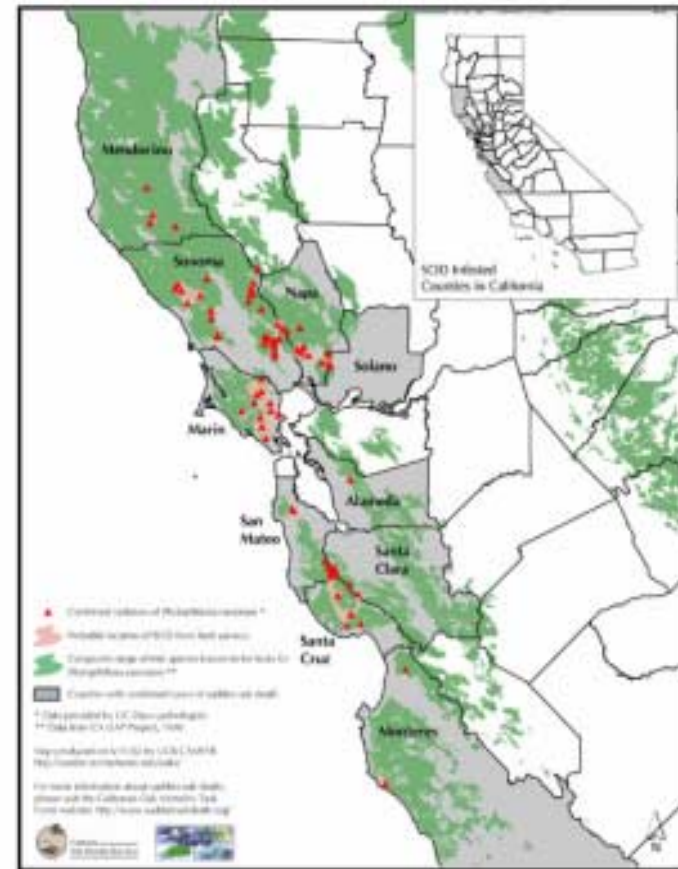
- Donor programmes, military movement, emergency food aid, government introductions
- Internet sales
- New trends in landscape choices...



2. Start by agreeing on the ecosystems most valued in your country, and establish what threatens these.



Distribution of Sudden Oak Death in California as of June 11, 2002



Pathway:

Plants for planting, wood, bark of L. — densiflorus (tanoaks), Q. agrifolia (coast live oak) and Q. kelloggii, soil from areas where the disease occurs.

Plants for planting of ornamental hosts (e.g. Rhododendron, Viburnum) and of Vaccinium ovatum from areas where the disease occurs.

PEST RISK ANALYSIS Sudden Oak Death – As PRAs are dynamic this PRA may be subject to change; each new version that is put onto the website will be given a new revision number.

DEFRA, UK

<http://www.defra.gov.uk/planth/pras/sudd.pdf>

http://www.eppo.org/QUARANTINE/Alert_List/Fungi/oak_death.html



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3. Start by focusing on protected areas or other geographic areas that merit special protection.

Initial steps may include:

- Identify key species or pathways.
- Focus surveillance on protected area.
- Work with other agencies and establish official control of worst pests.
- Link this with import regulations/quarantine status.
- Long term plan to prevent or reduce the source of the pest (e.g. imports or a domestic population).
- Is it better to maintain as a pest free zone or eradicate from the entire country?

PRAs on pests that indirectly affect plants through effects on other organisms will be more complex.

**The PRA framework includes
uncertainty,
which is possibly more important with
environmental risk.**

- Without uncertainty, there is no risk, only a known event or known consequences.



What to expect in the future?

Research in and greater interaction with ecological sciences will improve data and methodologies of PRAs.

As risk assessment and management become more complicated, even more capacity building, information resources and other tools will be needed.

**Management decisions
reflect the values
of the country
(or at least of the NPPO).**

Photo credits

- White tussock moth and its damage, Western USA, Paul Greenfield, USDA
- Circles of safeguarding efforts, from a presentation by Chuck Schwalbe, USDA/APHIS
- Prosopis
- Flowerhead weevil and *Cirsium* spp (native) thistle, Peter Kareiva, TNC
- Sudden oak death - map, Oak Mortality Task Force; symptoms, P. Svihra, California
- Southern Africa child - World Food Program

