

Forest Health Technology & Phytosanitary Standards

Beijing 6 to 11 November 2011
Fiji Islands Country Presentation

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Map of Fiji Islands



Presentation Outline

- Fiji's forest resources
- Known Invasive species in Fiji
- Problems with Invasive Alien Species (IAS)
- Current status on efforts to eradicate IAS
- Tools employed for surveillance
- Risk assessment
- Early detection
- Rapid response
- Challenges

Fiji's Forest Resources

- Total land mass area of 1.8 million hectares
- Fiji 's forest cover is approximately 935,000 hectares
- Indigenous forest comprises of 739,340 hectares, hardwood plantations of 51,490 hectares and Pine plantations of 43,700 hectares.

Forests in Fiji are categorized according to their management practices or uses such as:

Multiple use natural forest:	514,680 ha
Protection forests:	240,650 ha
Preserved forests:	55,000 ha

Forests of Fiji



Known Invasive Species in Fiji

Plants

- African tulip (*Spathodea campanulata*)
- Mile-a-minute (*Mikania micrantha*)
- Morning glory (*Ipomoea* sp.)
- Merremia sp.
- Lantana (*Lantana camara*)
- Albizia (*Paraserianthes falcataria*)

Invertebrates

- Termites & ambrosia beetles (known)

Fungi

- *Armilleria* sp. & *Phelinus noxius*

New Introductions

- 2006-2008: *Xylosandrus crassiosculus*, *Sinoxylon* sp & *Quadristichus erythrinae*
- 2009 – 2010: *Iguana Iguana* (American Iguana)
- 2010: *Coptotermes gestroi* (Asian subterranean termite) [most recent]

Captured American Iguana



Problems/Issues with Invasive Alien Species

- Shortage & inaccessibility of scientific information on basic biology for assessment of risks & management of invasive species
- Lack of awareness on the impacts of invasive species on bio-diversity
- Insufficient networking mechanisms established for the dissemination of information to the relevant decision-makers & govt. officials
- Coordination & collaboration at all levels on the management of invasive species threats to bio-diversity is not yet well developed.
- Impact of invasive species on bio-diversity not fully addressed
- Shortage of technically trained personnel & inadequate quarantine & risk assessment facilities
- Insufficient funding - training personnel, establishment of infrastructure, dev of risk assessment procedures & management & research on invasive species.

Problems with Invasive Alien Species



Coptotermes gestroi
(Causing Structural damage)



Coptotermes gestroi
(Infesting suppressed trees)



Termite (*Coptotermes gestroi*) pathway "mud galleries" on a tree



Termite (*Coptotermes gestroi*) pathway "mud galleries" on a coconut tree

Current Status on Efforts to Eradicate IAS

Coptotermes gestroi (Asian subterranean termite):

- Containment/eradication program commenced in 2010
- Funding from govt. (USD\$275,000)
- Assistance also provided from NGO's (SPC) & from DPI of Aust.

Iguana iguana (American Iguana):

- Eradication program commenced early this year
- Funding from govt. (USD\$165,00)
- Assistance also provided from NGO's & experts from USA.

Tools Employed for Surveillance

- Static traps (panel, lindgreen & delta) – detecting & monitoring insect pest populations
- GPS – site locations
- Mercury bulb, generator & white cloth – insect light trapping
- Insect net or swift net – trapping insects
- Visual line surveys - forests, nurseries, reserves



Static traps and visual line survey

Risk Assessment

- Literatures
- Websites – internet
- **(Lack capacity/expertise in country)**
- Consultants charge exorbitant fees
- Need pest list or data base of international pests/diseases/invasive/weeds

Early Detection

- Static traps set up at trade borders (for border security against invasive and trans-boundary pest and diseases, port survey)
- Sentinel plants – placed at trade borders/major ports of entry



Static traps & sentinel plants set up at main port of entry.

Rapid Response

- Contingency plans are developed by BAF - not so much networking between BAF and other government agencies
- Management Plans - but not for forest tree species
- Containment Plan – usually developed by consultants engaged through Aid projects



Challenges

- Capacity building for taxonomy skills, PRA's (Entomologist/Pathologist)
- Emergency Response Plan (ERP) – plan of action (once pest is detected at port of entry or in the country)
- List of pest and host for all countries – its threat potential at trade borders
- BAF – agricultural oriented/focused and capacity lies on agricultural pest



Thank You