



## **Dieback monitoring in the Wungong Catchment**

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# Dieback monitoring in the Wungong Catchment

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## Introduction

Dieback caused by *Phytophthora cinnamomi* is a significant threat to the health and vitality of many ecosystems in the Southwest and this includes the Wungong Catchment. It reduces the distribution and abundance of many plant species and their dependent fauna.

Dieback management seeks to minimise the risk of new introductions or extensions by identifying uninfested 'protectable' areas and controlling access into them. This requires the preparation and approval of Hygiene Management Plans (HMP) for disturbance activities. Thus by monitoring the outcomes of activities implemented through an approved HMP the success of the management goal can be assessed.

This project aims to review the effectiveness of dieback hygiene in minimizing the spread or introduction of *Phytophthora cinnamomi*.

The project will also include monitoring any effects of the catchment management on the rates of disease spread, but this component of the work is still being planned.

## Methodology

Monitoring sites are being selected to cover the range of disturbance activities, employing a range of hygiene tactics across a range of sites types. Activities include; FPC harvesting, FPC harvesting and notching, non-commercial notching and, due to the high level of research being conducted in the Catchment, a range of research sites will also be assessed.

Field assessment will be carried out by accredited senior Disease Hygiene Coordinators (DHC) due to high level of disturbance to vegetation and will be undertaken in accordance with "Interpreter guidelines for detection, diagnosis and mapping (*Phytophthora cinnamomi* and disease caused by it. Volume II)" (Forest Management Branch 2001).

In order to provide meaningful review of dieback hygiene effectiveness and particularly on the success of the implementation and sustainability of certain activities, causes must be attributed to any extensions and new introductions but also to breaches and failures that don't actually result in new infection. Indeed a new introduction may be due to natural spread not vectored by the activity. Some reasons may also be attributed to

unregulated or illegal activity following approved activities due to lack of maintenance of the approved hygiene measures, or to animal vectoring or non-apparent causes.

The site of each breach, extension or new infestation will be assessed in the field, and the appropriate operations supervisor and the DEC Wungong Catchment Coordinator will be interviewed in an attempt to determine the cause or causes. Evaluation of the breach, extension or new infestation and its position will be made with regard to its possible influence in terms of total area put at risk and likely impact on the ecosystem.

Site assessment will be recorded using a proforma developed for the Wungong Catchment Trial. Information from the proforma will be entered into a excel spreadsheet for storage, interrogation and summarising results. Standard Interpretation reports will be prepared by DHCs for each of the monitoring sites and a report summarising key finding will be prepared.

#### Milestones

Activity	Time (month/year)	Milestones
Background information	Oct 09	Collate background information for treatment operations and monitoring sites and enter in field assessment proforma.
Field assessment	Oct/Nov 09	Each site assessed for breaches/extensions or new infestations.
Sampling processing	Nov 09	Soil and tissue sample results returned from the VHS
Interviews	Dec 09	Where possible cause/causes of breach, extension or new infestation determined
Date entry and standard interpreter reports	Dec 09/Jan 10	Standard interpretation reports completed for each site (inc. sample summary and site maps). All site assessment data is entered into recording spreadsheet.
DHE monitoring (overall summary) report drafted	Jan 10	Collate findings from monitoring into draft report
DHE monitoring draft report circulated for review	Jan 10	Comments received from peer review of draft report
DHE monitoring (overall summary) final report	Feb 10	The major causes of any breaches, extensions, new infestations are established. Recommendations for improving procedures or implementation are developed.

#### Results/Discussion/Conclusion/Recommendations

Not applicable (study has not been completed).

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#### References

Forest Management Branch (2001). *Phytophthora cinnamomi* and disease caused by it. Volume II Interpreter guidelines for detection, diagnosis and mapping. D. o. E. a. Conservation. **II**.