

# Amitrole Derogation Application

## Annex 1: Application form to apply for a temporary derogation to use a 'highly hazardous' pesticide and for renewal of derogations.

- This form shall be used to submit derogation requests for the use of 'highly hazardous' pesticides to FSC (initial applications and applications for renewal).
- In cases of joint applications, common information can be provided together. Information that is not common shall be presented by applicant.
- All fields have to be filled for Management Units (MUs) of all scale categories, unless otherwise specified.
- All fields have to be filled for both initial applications and renewal applications, unless otherwise specified.
- In this context 'scale' refers to the size or extent of the Management Unit (MU).

Scale category	Number of hectares in the Management Unit
Small Scale	≤ 1,000 ha
Medium scale	Between small scale and large scale
Large scale	> 10,000 ha (plantations) > 50,000 ha (non-plantation forest types)

- Applications shall be submitted in English or Spanish.

### Part 1. GENERAL INFORMATION.

<b>Application Submission date</b>	
<b>Name, and contact details of certification body submitting the application</b>	<p>Rainforest Alliance Arie Soetjadi–Asia Pacific Coordinator JI Tantular Barat 88 Denpasar Bali Indonesia 80114 +623614723499 asoetjadi@ra.org</p> <p>Soil Association Soil Association Woodmark South Plaza, Marlborough Street BRISTOL BS1 3NX Tel: + 44 (0)117 9142435 Email: wm@soilassociation.org</p> <p>Forest Management and Controlled wood Larissa Chambers <a href="mailto:LChambers@soilassociation.org">LChambers@soilassociation.org</a></p> <p>SCS Global Services 2000 Powell St., Suite 600   Emeryville, CA 94608 USA tel: 510.452.8049   fax: (510) 452 6882 bgrady@scsglobalservices.com www.SCSglobalservices.com</p>

<b>Active ingredient for which a derogation is being requested</b>	Amitrole CAS 61-82-5
<b>Trade name and formulation type of the pesticide</b>	<ul style="list-style-type: none"> <li>• Nufarm Amitrole T Herbicide AC 250g/l Amitrole, 220g/l Ammonium Thiocyanate</li> <li>• Cyndan Weedeath Herbicide SC</li> <li>• Imtrade Amitrole 250 Herbicide AC</li> <li>• Aw Aggrav8 Herbicide EC</li> <li>• Farmalinx Amitat Herbicide SL</li> <li>• Sabakem Amitrole 47t Herbicide SL</li> </ul>
<b>Method of application, application equipment and intended quantities</b>  <b>Common and scientific name of the pest</b> (or description of the problem /issue, as applicable)	<p><u>Method of application and application equipment</u></p> <ul style="list-style-type: none"> <li>• Directed ground based with ATV or tractor</li> </ul> <p><u>Intended quantities</u></p> <p>As per label or permit instructions</p> <p>Estimated use is a maximum of 100 kg use per year. Indicative rates are:</p> <ul style="list-style-type: none"> <li>• 500 – 750grams per hectare</li> </ul> <p>Various grasses and broadleaved weeds</p>
<b>Name and FSC certification codes of certificate holders<sup>1</sup> requesting a temporary derogation. Please indicate scale category and whether it qualifies as SLIMF.</b>	<p><b>Large scale certificate holders</b></p> <ul style="list-style-type: none"> <li>• Albany Plantation Forest Company Pty Ltd Certificate code: SA-FM/COC-001378 License code: FSC-CO23801</li> <li>• Australian Bluegum Plantations Ltd Certificate Code: RA-FM/COC-001327 License Code: FSC-C019740</li> <li>• Bunbury Fibre. Plantations Ltd Certificate Code :SA-FM/COC-001528 License Code: FSC-C014610</li> <li>• WA Chip &amp; Pulp Co. Pty Ltd trading as WAPRES Certificate Code: SCS-FM/COC-004647 License Code: FSC-C117107</li> </ul>

<sup>1</sup> In the case of forest management enterprises applying for FSC certification, the FSC certificate holder code can be provided at a later stage, if and when the company achieves certification.

<b>Scope for which a temporary derogation is being requested (Please, attach map if possible)</b>	Refer attached map in Appendix 1.
<b>Type of forest, species and expected forest area where use of the HHP is intended</b>	Plantation of Eucalypt species including: <ul style="list-style-type: none"><li>• <i>Eucalyptus globulus</i></li><li>• <i>Eucalyptus nitens</i>, and</li><li>• <i>Eucalyptus smithii</i>.</li></ul>

## Part 2. SPECIFIC INFORMATION

### 1. Demonstrated need

a. *Please describe briefly the silvicultural system (methods for site preparation, practices for harvesting, regeneration, time between rotations) in the MU(s) included in the scope of the requested derogation.*

- Site preparation depends on slope and harvest methodology, which influences the amount of harvest residue. Consequently, site preparation ranges from weed control only, to heaping or chopper rolling residue, to ripping only or ripping and mounding. Tree nutrition is monitored and supplementary nutrients may be added to maximize productivity.
- Planting is carried out manually on all sites. For eucalypts, depending on survival and other site characteristics, coppicing is an option to re-establish plantations as is re-planting.
- Eucalypt plantations are grown on a 10-25 year rotation and at times, includes commercial thinning.
- Harvesting is carried out using a range of mechanised systems and every effort is made to avoid the use of manual felling.
- The time between rotations is kept to a minimum, ideally less than 12 months, as any delay results in a lost year of production and a lost year of land cost.

b. *Please describe the Integrated Pest Management (IPM) system in place, including the plan to monitor the distribution and density of the targeted pest organisms in the MU(s).*

All forest managers follow an Integrated Pest Management system similar to the FSC Guide to integrated pest management in FSC certified forests and plantations (Willoughby et al. 2009). The essential components of these systems are:

1. Identification of the problem
2. Assessment of the impact of the problem
3. Assessment of consequences of no actions
4. Where action is warranted, assess means of avoiding the problem
5. If the problem can't be avoided, assess non-chemical means of remediation
6. If non-chemical remediation is not possible, assess chemical means of remediation

For each assessment, consideration should be given to the short and long term impacts of both the problem and any action on:

1. Operators
2. Aquatic environments
3. Terrestrial environments
4. Stakeholders
5. Future operations

In the case of amitrole this process has been followed and is demonstrated below for each of the targeted pest organism that are the subject of this application.

<b>Problem identification</b>	<ul style="list-style-type: none"> <li>• Competition from grasses and broadleaf weeds within eucalypt plantation establishment areas where there is significant risk of chemical damage from standard second year weed control operations.</li> </ul>		
<b>Assessment of impact</b>	<b>Party / Aspect</b>	<b>Problem</b>	<b>Action</b>
	<b>Operators</b>	Nil	Potential exposure to poisoning
	<b>Aquatic environment</b>	Nil	Harmful if chemical enters waterways / water bodies
	<b>Terrestrial environment</b>	Maintenance of seed bank for undesirable agricultural weeds	Improvement in composition of terrestrial flora
	<b>Stakeholders</b>	Reduction of plantation performance leading to loss of investment return	Contamination of crops and other land uses
	<b>Future operations</b>	Failed plantation establishment Increase costs for diminished returns Viability of plantations at a local level	Maintenance of sustainable plantation industry at a local level Flow-on social and economic benefits
<b>Consequence of no action</b>	<ul style="list-style-type: none"> <li>• Plantation failure leading to increased costs at year 2 for re-establishment</li> <li>• Extra costs are carried for a minimum of 10 years before commercial return</li> <li>• Extra chemical use required for plantation re-establishment</li> <li>• Poor weed control and lack of site occupation diminishes the effectiveness of subsequent fertilizer application</li> <li>• Overall under performance of plantation in early stages when maximum growth is critical for the future performance of the crop</li> </ul>		
<b>How can problem be avoided?</b>	<ul style="list-style-type: none"> <li>• Successful establishment of seedlings and site occupation in the first year will limit the requirement for second year weed control, however the problem can never be totally avoided due to variations in site types, climate zones and seasonal conditions.</li> </ul>		
<b>Are there non-chemical control options?</b>	<ul style="list-style-type: none"> <li>• Inter-row cultivation is used in some situations where woody weeds are present but is an expensive option relative to chemical control and there is risk to damaging the tree crop and erosion of the topsoil.</li> <li>• Follow-up chemical application is usually required given the soil disturbance using this method.</li> </ul>		
<b>What are the impacts of chemical control options?</b>	<ul style="list-style-type: none"> <li>• No negative impacts have been detected in the 20 years that second year weed control operations have been in place in the greater South West region of WA.</li> <li>• A long term water monitoring project focusing on aquatic fauna as water quality indicators did not detect differences between an 'impacted' and 'comparative' stream.</li> </ul>		

<b>References</b>	<ul style="list-style-type: none"><li>• Fremlin (unpublished), Second year Weed Control in E.globulus Plantations</li><li>• Cook, B.A. and Janicke G, Centre of Excellence in Natural Resource Management, University of Western Australia, Impacts of blue gum plantations on biodiversity and water quality in a small stream</li><li>• Nufarm, MSDS NU00H, Amitrole T Herbicide</li><li>• Nufarm, Chemical product label, Amitrole T</li></ul>
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c. *Please indicate the thresholds above which, the damages caused by the targeted pest organisms are classified as severe and how they have been established.*

<b>Pest</b>	<b>Threshold for damage</b>	<b>Basis of threshold</b>
Grass weeds	Present as a proportion of 100% ground coverage	Unpublished paper (Fremlin)
Broadleaved weeds	Present as a proportion of 100% ground coverage	Unpublished paper (Fremlin)
Total weed covers	100% ground coverage	Unpublished paper (Fremlin)

d. *Please indicate the population size of the targeted pest organism in the MU(s).*

<b>Pest</b>	<b>Population Size</b>
Grass weeds	Weeds are essentially ubiquitous in the landscape. At times, establishment weed control can be avoided due to cultivation and low background levels. Amitrole is targeted at approximately 12-18 month old plantations and consequently there is ample time for recolonisation by weeds through wind deposition of seeds or through germination of weed seeds in the soil seed bank. While the exact species composition varies between and within season, the presence of weeds does not.
Broadleaved weeds	

e. **(Fill in only if you represent a large-scale MU)**

*Please indicate the conclusions of the comparative Cost/Benefit Analysis of using the requested pesticide versus other non-highly hazardous control alternatives,*

*The cost – benefit analysis shall include, at minimum, the following scenarios:*

- *no action vs. remedial control (short-term)*
- *no action vs. preventive practices (long-term)*

- Refer to Appendix 2 – Cost Benefit Analysis.

f. **(Fill in only if you represent a large-scale MU)**

*Please provide a review carried out by independent experts of the Cost/Benefit Analysis in e).*

- The experts nominated by the FSC Australia board will review the costs benefit analysis at their meeting on 29<sup>th</sup> January prior to submission of the final applications.

g. **(Fill in only if you represent a medium or small-scale MU)**

*Please describe possible non HHP alternatives to the use of the requested HHP and explain why they are not considered feasible to control the targeted pest organisms.*

- Please refer to information above for small and medium scale MU's.

h. *Please include an estimate of the amount of area over which the pesticide is to be applied and how much of the pesticide is expected to be used annually.*

<b>Albany Plantation Forest Company Pty Ltd</b>	
<b>Estimated Annual Area of application (ha)</b>	Up to 30ha
<b>Estimated Annual Use Active Ingredient (kg)</b>	Up to 15kg
<b>Australian Blue Gum Plantation Ltd</b>	
<b>Estimated Annual Area of application (ha)</b>	Up to 200ha
<b>Estimated Annual Use Active Ingredient (kg)</b>	Up to 40kg
<b>Bunbury Fibre. Plantations Ltd</b>	
<b>Estimated Annual Area of application (ha)</b>	Up to 100ha
<b>Estimated Annual Use Active Ingredient (kg)</b>	Up to 25kg
<b>WA Chip &amp; Pulp Co. Pty Ltd trading as WAPRES</b>	
<b>Estimated Annual Area of application (ha)</b>	Up to 30ha
<b>Estimated Annual Use Active Ingredient (kg)</b>	Up to 15kg



**i. (Fill in only if you are applying for the renewal of a derogation)**

*Please attach a report on the implementation of the IPM system during the previous derogation period, covering at minimum:*

- *Brief description of the silvicultural system in the MU(s) included in the scope of the requested derogation.*
- *A list of the monitored pest organisms.*
- *The results of the annual monitoring of the target species in relation to the defined thresholds.*
- *Quantitative data of the use of 'highly hazardous' pesticides per year for the full period of the existing derogation, areas of application and application method.*
- *A description of the programs that have been implemented to investigate, research, identify and test alternatives to the 'highly hazardous' pesticide, and the results.*

- Much of this material is described in detail elsewhere in this application:
  - Details of the silvicultural systems in the MU(s) are included in response to Question 1.a.
  - Details of the monitored pest organisms are included in response to Question 1.c. and 1.d.
  - Details of the results of monitoring programs are summarized in response to Question 1.d.
  - Details of the amount of amitrole used during the period of the previous derogation is included below.
  - Details of the programmes that have been implemented to investigate, research, identify and test alternatives to the use of amitrole in response to Question 3.a. and 3.d.

**Historic use of Amitrole over the last 5 years**

**Albany Plantation Forest Company Pty Ltd**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Total are treated (ha)</b>	6	0	0	0	0
<b>Total active ingredient used (kg)</b>	3.0	0	0	0	0
<b>Total Defined Forest Area (ha)</b>	21, 665	21, 690	19, 666	19, 202	18, 117

**Australian Blue Gum Plantation Ltd**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Total are treated (ha)</b>	0	72	75	89.8	93.2
<b>Total active ingredient used (kg)</b>	0	36.0	37.5	44.89	19.18
<b>Total Defined Forest Area (ha)</b>	92,041	113,116	107,861	98,362	89,390

**Bunbury Fibre. Plantations Ltd**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
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<b>Total are treated (ha)</b>		239.6	28.5	149.2	
<b>Total active ingredient used (kg)</b>	0	149.75	128.5	93	0
<b>Total Defined Forest Area (ha)</b>	14425.6	14425.6	14428.5	14428.5	14425.8
<b>WA Chip &amp; Pulp Co. Pty Ltd trading as WAPRES</b>					
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Total are treated (ha)</b>	732	451	120	119	207
<b>Total active ingredient used (kg)</b>	336	225.5	60	59.5	103.5
<b>Total Defined Forest Area (ha)</b>	20918	22885	35000	37354	34569

## 2. Specified measures to prevent, minimize and mitigate impacts

- a. *Please describe the best management practices (BMP) that will be implemented in the MU(s) to prevent, minimize and mitigate negative social and environmental impacts of the application of HHPs during the requested derogation period, covering at minimum: application method, water courses, land use or terrain and weather conditions.*

### Measures required by Australian stakeholders

In addition to compliance with regulatory controls, forest managers seeking to use Amitrole will undertake the following controls to reduce risks:

- As an endocrine disruptor critical risk controls are those that reduce human exposure to the pesticide. Pesticide application therefore requires the use of appropriate protective equipment especially to prevent inhalation during application (e.g. respirators, cab air filter systems).
- Spray drift is minimised in all spraying operations through the use of appropriately trained chemical applicators and specialised equipment. In addition, spray drift is contained in tree canopies further reducing risk.
- Spray buffers put in place along waterways and other sensitive environments will be determined in accordance with the associated risk of the treatment area.
- In operations deemed too high risk for the use of Amitrole, alternative chemicals with lower risk will be used, regardless of cost.

### Measures required by Australian law and other requirements

Each forest manager operates under a BMP or equivalent (eg, a BOP or Best Operating Practice) which stipulates compliance with a number of processes which ensures the risk of pesticide use is managed to a level that mitigates any potential impacts. The processes which BMP's consider include:

#### Compliance With National Regulation

In Australia the Australian Pesticides & Veterinary Medicines Authority (APVMA) is responsible for the registration and control of herbicides up to the point of retail sale. The

registration process is governed by Commonwealth legislation and undertaken according to accepted scientific principles and through rigorous independent analysis by several government agencies and the APVMA. Before being registered for sale, products must go through a risk assessment process and specifically meet the requirements of the Agvet Code 5a with regard to safety of the environment and humans:

(1) An active constituent or chemical product meets the safety criteria if use of the constituent or product, in accordance with any instructions approved, or to be approved, by the APVMA for the constituent or product or contained in an established standard:

(a) is not, or would not be, an undue hazard to the safety of people exposed to it during its handling or people using anything containing its residues; and

(b) is not, or would not be, likely to have an effect that is harmful to human beings; and

(c) is not, or would not be, likely to have an unintended effect that is harmful to animals, plants or things or to the environment.

(2) For the purposes of being satisfied as to whether an active constituent meets the safety criteria, the APVMA:

(a) must have regard to the following:

(i) the toxicity of the constituent and its residues, including metabolites and degradation products, in relation to relevant organisms and ecosystems, including human beings;

(ii) the method by which the constituent is, or is proposed to be, manufactured;

(iii) the extent to which the constituent will contain impurities;

(iv) whether an analysis of the chemical composition of the constituent has been carried out and, if so, the results of the analysis;

(v) any conditions to which its approval is, or would be, subject;

(vi) any relevant particulars that are, or would be, entered in the Record for the constituent;

(via) whether the constituent conforms, or would conform, to any standard made for the constituent under section 6E to the extent that the standard relates to matters covered by subsection (1);

(vii) any matters prescribed by the regulations; and

(b) may have regard to such other matters as it thinks relevant.

(3) For the purposes of being satisfied as to whether a chemical product meets the safety criteria, the APVMA:

(a) must have regard to the following:

(i) the toxicity of the product and its residues, including metabolites and degradation products, in relation to relevant organisms and ecosystems, including human beings;

(ii) the relevant poison classification of the product under the law in force in this jurisdiction;

(iii) how the product is formulated;

(iv) the composition and form of the constituents of the product;

(v) any conditions to which its registration is, or would be, subject;

(vi) any relevant particulars that are, or would be, entered in the Register for the product;

(via) whether the product conforms, or would conform, to any standard made for the product under section 6E to the extent that the standard relates to matters covered by subsection (1);

(vii) any matters prescribed by the regulations; and

(b) may have regard to one or more of the following:

(i) the acceptable daily intake of each constituent contained in the product;

(ii) any dietary exposure assessment prepared under subsection 82(4) of the Food Standards Australia New Zealand Act 1991 as a result of any proposed variation notified under subsection 82(3) of that Act in relation to the product, and any comments on the assessment given to the APVMA under subsection 82(4) of that Act;

(iii) whether any trials or laboratory experiments have been carried out to determine the residues of the product and, if so, the results of those trials or experiments and whether

those results show that the residues of the product will not be greater than limits that the APVMA has approved or approves;

- (iv) the stability of the product;
- (v) the specifications for containers for the product;
- (vi) such other matters as it thinks relevant.

(Agricultural and Veterinary Chemicals Code ACT 1994 – Schedule Agricultural, Commonwealth Consolidated Acts, [http://www.austlii.edu.au/au/legis/cth/consol\\_act/aavcca1994382/sch1.html](http://www.austlii.edu.au/au/legis/cth/consol_act/aavcca1994382/sch1.html))

APVMA take a risk management approach to product registration which includes the imposition of conditions on product approvals or registrations. These conditions of use are legally enforceable strategies to reduce risk. Further, the Agvet Code regulations allow APVMA to restrict the use of certain chemicals that have a high risk profile so that only persons with additional training, licensing and compliance steps may purchase or use a pesticide. These conditions include detailed label instructions for safe use and associated Material Safety Data Sheets (MSDS) for the safe handling and application of pesticides. Label/MSDS instructions include details for mixing, treatment rates, protection of wildlife, protection of non-target plants, storage, disposal, operator safety and first-aid.

Registrants must provide the APVMA with information about the product to allow independent evaluators to decide whether it is effective and safe for people, animals and the environment, and not a trade risk. The APVMA notifies the public of the results of the evaluation and invites public comment on the registration proposal before making its decision. It also invites members of the public to participate in its programs such as reporting adverse chemical experiences through the Adverse Experience Reporting Program (AERP) and contributing to chemical reviews.

### **Compliance With State Regulation**

State and Territory Governments are responsible for controlling the use of pesticides beyond the point of retail sale. Each state or Territory has a regulatory body or bodies responsible for pesticide use, for example in Victoria it is the Department of Environment, Land, Water and Planning, and in Western Australia, the Department of Agriculture and Food and, WA Health. All have similar legislation and codes of practice to ensure safe and effective application of registered chemicals.

For the states concerning the National Derogation applications, the relevant regulations are:

Queensland - Agricultural Chemicals Distribution Control Act 1966

(<https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/A/AgChemDisA66.pdf>)

South Australia - Agricultural and Veterinary Products (Control of Use) Act 2002 and Regulations 2004

(<http://www.legislation.sa.gov.au/LZ/C/A/AGRICULTURAL20AND%20VETERINARY%20PRODUCTS%20%28CONTROL%20OF%20USE%29%20ACT%202002.aspx>)

Tasmania-Agricultural and Veterinary Chemicals (Control of Use) Act 1995

(index.w3p;cond=phrase;doc\_id=106%2B%2B1995%2BAT@EN%2B2004031000000;histon =;prompt=;rec=;term=Agricultural%20and%20Veterinary%20Chemicals%20%28Control%20of%20Use%29%20Act%201995)

Victoria - Version No. 004 Agricultural and Veterinary Chemicals (Control of Use)

Regulations 1996 S.R. No. 71/1996 Version incorporating amendments as at 6 May 2003 (<http://www.vic.gov.au/search-results.html?q=pesticide+regulation>)

Western Australia – Health (Pesticides) Regulation 2011 ([http://www5.austlii.edu.au/au/legis/wa/consol\\_reg/hr2011277/](http://www5.austlii.edu.au/au/legis/wa/consol_reg/hr2011277/))

Each of these acts or regulations interacts with other acts, for example, in South Australia:

- Controlled Substances Act 1984
- Controlled Substances (Poisons) Regulations 1996
- Controlled Substances (Pesticides) Regulations 2003
- Dangerous Substances Act 1979 and Regulations 2002
- Work Health and Safety Act 2012 and Regulations 2012
- Environment Protection Act 1993

While these differ from state to state, since 2008, each state and Territory has agreed to a common framework for the control of use of agricultural and veterinary chemicals. As a result, the control of use is now becoming increasingly consistent across States and Territory's (COAG, 2008).

The end result for each state is that pesticides are:

- transported and stored safely
- used only by persons that are appropriately trained and where deemed necessary, licensed
- used in a way that ensures the safety of applicators and the public
- used in a way that ensures the safety of the environment
- used in an accountable manner through detailed recording of all areas of application, pesticide application methodology and environmental conditions at the time of application

Like the APVMA, states and territories take a risk management approach to pesticides and frequently there are limitations on which states or territories pesticides may be used and how they may be used in those states. For example, Fox Off fox bait (one of the most common products containing 1080) refers to specific conditions of use for different states.

### **Forestry Application**

All certified companies have well documented policies and operational procedures, best practice manuals or similar for the use and handling of chemicals that are in alignment with State and Federal Government requirements. These include Integrated Pest Management Strategies, detailed Site operation plans and Site Specific Silviculture plans.

Staff are trained to a high level and only qualified staff or contractors, are used to carry out pest control operations. All label and MSDS instructions are adhered to. Follow-up monitoring of the impacts of the operation on the pest population and the crop is carried out.

### **Endangered Species**

Each forest manager maps the presence of endangered species. Where the use of a highly hazardous pesticide presents a risk, either the pesticide is not used in the area or appropriate buffers or exclusions are used.

### **Special Management Zones**

Forest managers consider special management zones whether they be environmental, scientific or cultural. Where the use of a highly hazardous pesticide presents a risk, either the pesticide is not used in the area or appropriate buffers or exclusions are used.

### Site Risk Assessment

There are multiple levels of risk assessment carried out for each and every site as part of operational planning. Site-specific application plans are developed that address any known stakeholder and environmental concerns. For high risk or impact activities, adjacent stakeholders are notified and given the opportunity to both provide feedback and influence the operation. Application plans include details of un-treated buffer zones, which are used to protect sensitive areas within, or adjacent to, the plantation. In addition to the above, application plans consider access to the site, slope, soil type, current and future climatic factors. Based on this risk assessment, appropriate application techniques, rates and timings are chosen prior to operations being undertaken. When operations are to be undertaken, further risk assessment is carried out on the day or days of operation and where circumstances have changed, most particularly climate, additional risk management is put in place or if appropriate, operations are not carried out.

**b. (Fill in only if you represent a large or medium-scale MU)**

*Please describe the training program on the use of the PPE and the application of the HHP that will be implemented in the requested derogation period.*

- All business involved in the direct application of amitrole will be required to hold relevant pest applicator licences.
- All persons involved in use of amitrole are required to hold statements of attainment demonstrating their competence in the following nationally recognised units of competency.
  - AHCCHM101A Follow Basic Chemical Safety Rules
  - AHCCHM201A Apply Chemicals Under Supervision
  - AHCCHM303A Prepare and Apply Chemicals
  - AHCCHM304A Transport, Handle and Store Chemicals
- Through the completion of the units, applicators must demonstrate:
  - Understanding current chemical application issues
  - Determining suitable weather conditions
  - Knowledge to limit spray drift including latest innovations in application and nozzle selection criteria
  - Safe storage requirements
  - Record keeping requirements

**c. (Fill in only if you represent a large-scale MUs and you are applying for the renewal of a derogation)**

*Please indicate the conclusions of the environmental and social impact assessment related to the use of HHP occurred during the previous derogation period.*

- Please refer to Appendix 3- Stakeholder report.

**d. Additional information (Eg: insurance providing coverages for pesticides related damage to environmental values and human health, etc.)**

- Public Liability and Work Cover insurance is held to ensure that the cost of any impact on the health of the public, employees, contractors, visitors or recreational users of the forest management units or their property is covered.

**3. Program to identify, investigate, and test alternatives to the ‘highly hazardous’ pesticide (including preventive silvicultural measures)**

**a. (Fill in only if you represent a large-scale MU)**

*Please describe the research program (individually or in collaboration with other research agencies/institutions or commercial enterprises) and/or field trials of alternative non-chemical or less hazardous methods of pest management that have been planned for the requested derogation period, including devoted resources and expected timelines.*

- Regrettably the successful model of CRC’s (cooperative research centres) for various research topics, such as forestry or weed control, has been largely abandoned by the Australian federal government. The CRC’s saw the best minds from industry, universities, CSIRO and international experts collaborate to provide some remarkable research outcomes. As a result of their demise, research into weed control is now spread across a large number of organisations such as state government agencies, for example, PIRSA in South Australia), Research and Development Corporation (eg, Grains Research and Development Corporation) and other interest groups. The principal model for research into weed control for plantation forestry currently is the APIPRC (Australian Plantation Industry Pesticide Research Consortium). This consortium is funded by forest managers direct cash input and in-kind contributions for which the cash component is matched by FWPA (Forest and Wood Products Association), whose funds are sourced from an industry level on sales. The APIPRC was formed in 2010 to replace the work of Dr. Barry Tomkins who had previously coordinated and conducted research principally into establishment weed control primarily to identify alternatives to Simazine. The scope of the APIPRC was broadened to include pesticides more generally. The APIPRC has an annual budget of up to \$200,000 annually for the past 5 years and has conducted a range of trials each year in Australia testing various herbicides and combinations, including herbicides made available by chemical manufacturers. Despite these substantive efforts, no commercially viable non-herbicide based management options have yet been identified that could replace the judicious use of Amitrole.
- The APIPRC is well placed to develop new methodologies and pesticides for weed control, including potential replacements for Amitrole. The membership of the consortium includes forest managers from across Australia, including several state based forest managers with direct access to innovations and developments from other state government entities. The membership also includes arguably the pesticide suppliers most active in research into new pesticides and in particular, innovations that reduce drift and exposure. The consortium also tenders out its research project to a broad base of research suppliers further extending the reach and knowledge base of the group.

**b. (Fill in only if you represent a medium-scale MU)**

*Please describe how you will support and/or be involved in a research program from research agencies/institutions (e.g. universities) or commercial enterprises in the requested derogation period, including devoted resources and expected timelines.*

- There are no medium scale MU’s who are party to this application.

**c. (Fill in only if you represent a small-scale MU)**

*Please describe the program to exchange information related to pesticides use with other forest managers, to contact research institutions and/or search in alternative databases that will be implemented in the requested derogation period.*

- All small scale MU's have participated in the national process and their group managers are members of relevant industry research programs.

**d. (Fill in only if you are applying for the renewal of a derogation)**

*Please describe the programs that have been implemented to investigate, research, identify and test alternatives to the requested 'highly hazardous' pesticide, and the results.*

- Research for alternatives that is being done by the broader Australian community is described in detail in Question 3.a.
- Below is a summary of the work that has been done by the applicants who are applying for a renewal of a derogations to investigate, research, identify and test alternatives. This work has been targeted to specifically address the FSC Board's recommendations in the existing derogation for amitrole.

**Derogation Number: FSC-DER-30-V1-0 EN Amitrole Australia 01022011**



<b>FSC Board recommendation 1</b>	reduce application rates of Amitrole to the minimum needed for achieving management goals by using mixed formulations that contain Amitrole as a (minor) component and supplementing or replacing it with alternatives such as cultural and preventive measures, or less hazardous herbicides (if registered), e.g. aminopyralid, asulam, clopyralid, cycloxydim, fluroxypyr, imazapyr, metosulam, metsulfuron-methyl picloram, primisulfuron, sulfometuron -methyl, and natural products (e.g. fatty acids, pelargonic acid) or analogues (mesotrione);
<b>Applicant's response</b>	<p>Other than Aminopyralid, none of the listed chemicals are candidates to replace amitrole. Aminopyralid has not been tested but is unlikely to be an alternative (Fremlin unpublished report 2011).</p> <p>An alternative to Amitrole must be relatively safe given the degree of spray contact with the foliage of the trees. Clopyralid is used in plantations as an over-spray although it can cause damage to trees and is narrow in its spectrum (broadleaf specific) so it cannot be considered as a viable alternative.</p> <p>Amitrole is used as a tank mix with non-HH listed chemicals for maximum efficacy, namely Simazine and Sulfometuron-methyl, to maintain low application rates.</p> <p>A decision early in the season to treat a site, will limit weed development and hence application rates however this must be balanced with the potential for subsequent weed germination in the subsequent spring. Controlled livestock grazing can also suppress weed development leading to lower application rates required.</p>
<b>FSC Board recommendation 2</b>	apply Amitrole via ground spraying only;
<b>Applicant's response</b>	Ground application is the prescribed application method suitable for the intended use and outcomes for Amitrole, with large droplet size directed at the base of the tree so as to avoid phytotoxicity and chemical drift.
<b>FSC Board recommendation 3</b>	Applicants to apply Amitrole directly as a strip treatment across the mound or as an inter-row application when trees are particularly small (e.g., during the first two years after planting);
<b>Applicant's response</b>	Amitrole is used as a maintenance treatment in one year old plantations to knock down weeds. The spray is directed inter-row and to the base of the tree; however some contact with foliage is expected. At this level of contact there is no impact on the growth of the trees. Amitrole is used once in the life of a plantation.
<b>FSC Board recommendation 4</b>	keep records on Amitrole use (treated area, application rate/method), include information in forest management reports, and set quantitative targets for use reduction (e.g. 40% reduced total use (kg active ingredient per year) within two years, and 80% less within four years);
<b>Applicant's response</b>	<p>All forest managers keep usage records as prescribed by the Amitrole derogation. These records are scrutinised by auditors during annual surveillance audits under Criteria 6.6.</p> <p>Use reduction targets must be linked to the discovery of satisfactory alternative control measures in order that plantation establishment success is not compromised.</p>
<b>FSC Board recommendation 5</b>	conduct field trials to identify less hazardous alternative herbicides, and improve nonchemical (cultural, mechanical, and/or biological) methods within integrated weed management;

<p><b>Applicant's response</b></p>	<p>Amitrole is unique in both its versatility to cover a broad range of grass and broadleaf pest species and the tolerance that eucalyptus species have to the spray contact.</p> <p>The identified alternative chemicals that are registered for forestry use and are acceptable to FSC, generally have a narrow weed spectrum, are not registered for forestry use and/or are toxic to the crop trees (Fremlin 2011).</p> <p>The chemical registration process is a very time consuming and expensive exercise for chemical companies, particularly when the level of demand could be described as 'niche' at best for the plantation forestry industry. This has limited the opportunity to test alternative, less hazardous chemicals</p> <p>However, the common specifications for use dictate that second year weed control utilising Amitrole is not employed where seedling establishment is successful and early growth in the first 10 months exceeds 2 metres in height, perennial weeds are not present and the plantation trees are occupying the site. The cost benefit of applying Amitrole beyond the winter months diminishes as annual weeds begin 'turning'.</p> <p>This dictates that Amitrole is not used routinely on all hectares under establishment, but rather where the need is demonstrated by inadequate tree height and the presence of highly competitive weed species. High levels of weed competition may arise where seasonal conditions (eg summer rainfall) increases weed loads on some sites prior to standard second year weed control operations. This often accounts for the sporadic and low level of use of Amitrole in the forest estate.</p>
<p><b>FSC Board recommendation 6</b></p>	<p>strictly follow all specified protocols to reduce the risks to workers and non-target species;</p>
<p><b>Applicant's response</b></p>	<p>All businesses involved in the direct application of Amitrole are required to hold relevant pest applicator licences.</p> <p>All persons involved in use of Amitrole are required to hold statements of attainment demonstrating their competence in the following nationally recognised units of competency.</p> <ul style="list-style-type: none"> <li>- AHCCHM101A Follow Basic Chemical Safety Rules</li> <li>- AHCCHM201A Apply Chemicals Under Supervision</li> <li>- AHCCHM303A Prepare and Apply Chemicals</li> <li>- AHCCHM304A Transport, Handle and Store Chemicals</li> </ul> <p>Amitrole MSDS and Product Label is made available to applicators of the chemical.</p> <p>Spraying operations are prescribed to identify sensitive values, apply appropriate buffers and define weather parameters in order that risks are managed. Additional (to legislation) appropriate protection measures will be defined.</p> <p>Audits are undertaken to ensure that requirements are being met and records of application collated. Annual external FM audits will check all of the above.</p> <p>It should be noted that Amitrole is also registered for use for the control of weeds in a wide range of situations, including but not limited to orchards, vineyards, irrigation ditches and drains, roadsides, pre-plant cereal and pulse crops and general industrial situations (see product label). The level of use and therefore risk to workers and non-target species is insignificant relative to these other uses.</p>

<b>FSC Board recommendation 7</b>	If ownership of a company which previously applied for a derogation has changed, provide information on the currently established measures for risk mitigation during pesticide use and general risk management (particularly regarding use of Amitrole).
<b>Applicant's response</b>	<p>Australian Bluegum Plantations Pty Ltd is the only applicant to whom this condition applies.</p> <p>Australian Bluegum Plantations Pty Ltd had and continues to have in place a risk assessment for Amitrole (as with all chemicals) and controls have been established for each of the following hazards; spray drift; loading/unloading chemical; chemical transport; spills; spraying adjacent to neighbours; inadequate timing; exposure to operators; package and chemical disposal; incorrect calibration; spraying in poor weather conditions; spraying near waterways; cleaning equipment; incompatibility with other chemicals.</p> <p>The hazard, risk rating and control have been recorded in the company's Risk Register. Staff and contractors using this chemical are made aware of this information via MSDS and the chemical risk assessments.</p> <p>These policies and procedures have been reviewed at surveillance audits.</p>

#### 4. Stakeholder consultation

- a. *Please indicate the dates when the stakeholder consultation was conducted.*
- Stakeholder consultation was commenced on the 25<sup>th</sup> of September 2015, with the distribution of letters, information and a survey to stakeholders. All draft derogations were published on the FSC Australia website.
  - From the 28<sup>th</sup> of September to the 16<sup>th</sup> of November stakeholders were encouraged to meet with forest manager's representatives.
  - The initial opportunity for stakeholders to provide feedback to forest managers ceased on the 16<sup>th</sup> of November.
  - A webinar public forum was held on the 23<sup>rd</sup> of November.
  - As recommended by the FSC Australia Board an advisory group was formed including an environmental expert and a social expert to provide advice and suggestions around the derogation applications and the stakeholder feedback received. The advisory group first met on the 24<sup>th</sup> of November.
  - After consultations with the advisory group, revised derogation applications were made available for comment again on the FSC Australia website from 22<sup>nd</sup> of December until the 24<sup>th</sup> of January.
  - The advisory group will meet again on the 29<sup>th</sup> of January to discuss any further stakeholder comment.
- b. *Please indicate which affected stakeholders (eg. neighbouring, local communities, forest workers) have been consulted. Neighbours, local communities, other forestry companies, silviculture contractors and customers.*
- Please refer to the stakeholder engagement report – Appendix 3.
- c. *Please indicate other stakeholders consulted (e.g. government agencies for environmental protection or public health, scientific experts, regional/local authorities and associations, representatives of hunters, farmers or non-governmental organizations).*
- Please refer to the stakeholder engagement report – Appendix 3.
- d. *Please describe the information on hazards, intended use of the HHP and commitment to prevent, mitigate and/or repair damage to environmental values and human health that has been provided to stakeholders.*
- Summary information on each relevant pesticide was provided to all stakeholders, including:
    - The hazardous attributes of the pesticide which led to it appearing on the FSC Highly Hazardous list.
    - Why forest managers use the pesticide as part of their forest management practices
    - Controls which forest managers put in place to mitigate the risk the pesticide presents
    - Efforts forest managers are making to avoid or reduce the need to use the pesticide
    - Research underway to seek alternatives to the pesticide
    - Copies of draft applications for derogations.
  - A copy of the pesticide summary provided to stakeholders is included in the attached stakeholder engagement report.

e. *Please describe the consultation mechanism (i.e. public notices in local newspapers or on local radio stations, letters sent to potentially affected persons, meetings, field observations etc.) used to inform, consult and receive significant feedback.*

- A range of stakeholder consultation mechanisms have been utilised, commencing with emails or letters to known stakeholders to participate in the derogation consultation process. Information was also posted on forest manager websites and on the website of FSC Australia. This information included:
  - Downloadable information (technical and jargon free) regarding the derogation application detailing the pesticides, their hazards, rationale of continued use, intended use and management strategies to mitigate potential impacts, including weblinks to other information sources (e.g. FSC).
  - Information regarding stakeholder consultation opportunities, including a summary of the engagement plan.
  - A link to the online survey and contact information to request hardcopy or telephone survey options.
  - Information regarding public comment submissions, including a link to the public comment template and return options (email and postal address).
  - Contact information to talk with a company representative to provide feedback in person or over the telephone.
  - Online forums and recordings of these for download (if requested).
  - Contact information for the National Coordinator.
- Upon request hardcopy information packs were provided with relevant information.

f. *Please summarize the comments received and how stakeholder concerns were addressed. (Where necessary, the original stakeholder comments may be requested).*

- Please refer to Appendix 3 – Stakeholder Engagement Report.

#### **5. Certification Body Evaluation of the compliance with the requirements of the previous derogation approval**

**(To be filled in by the certification body only in renewal applications)**

a. *Please confirm if during the previous derogation period the applicant has identified and located on maps the streams, rivers, lakes and other water zones, as well as buffer zones and other sensitive areas (e.g. groundwater zone providing water for public consumption, natural reserves, conservation zones and protection areas for rare and threatened species, or habitat with biodiversity refuge.*

b. *Please confirm if during the previous derogation period the applicant has effectively implemented control measures to prevent, minimize and mitigate negative social and environmental impacts associated with the use of the 'highly hazardous' pesticides.*

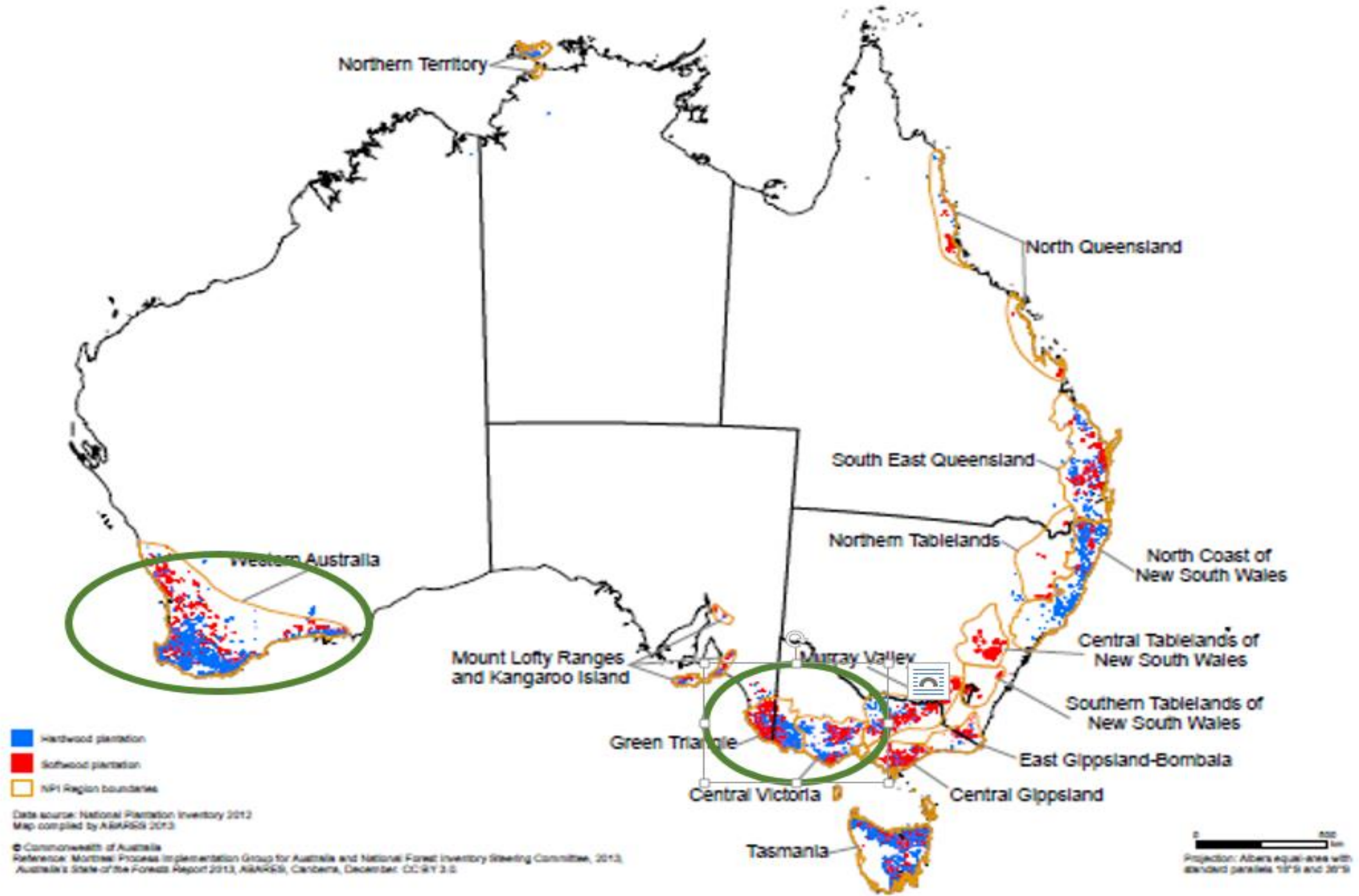
c. *Please confirm if during the previous derogation period workers dealing with HHP were provided with appropriate training on the use of the PPE and the application of the HHP.*

d. *Please confirm if during the previous derogation period workers dealing with HHP were provided with appropriate personal protective equipment (PPE) and the use of them was enforced.*




e. *Please confirm if the applicant has implemented all the conditions set by the Pesticides Committee as part of the derogation approval.*

# Appendix 1. Map of plantation areas involved in the Amitrole derogation application

Distribution of Industrial plantations and National Plantation Inventory regions



Appendix 2 Cost Benefit Analysis Amitrole

Cost Benefit Analysis. Amitrole									
Stakeholder Feedback:									
Stakeholders were highly concerned about the potential impacts of Amitrole on human and ecological health, particularly as an endocrine disrupter and potential carcinogen. While further research and the use of non-toxic alternatives is preferred, if Amitrole is to be used stakeholders would like to see conditions implemented to reduce risk to spray contractors, neighbours and the environment.									
	Control Regime Description	Economic Impacts		Environmental Impacts		Social Impacts			Overall Outcome
		Criteria 1	Criteria 2	Criteria 1	Criteria 2	Criteria 1	Criteria 2	Criteria 3...	
		Basic NPV type analysis (item 1.5)	Other economic impacts	Onsite impacts	Off-site impacts	Worker health and safety	Impacts on neighbours	Legal compliance	
<b>No use of Amitrole</b>	<i>Amitrole will not be used. Alternative pesticides will be used where applicable.</i>	NPV -\$135/ha IRR -68%	The alternative chemicals currently registered for forestry use, have a narrow weed spectrum efficacy and are toxic to the crop trees. This represents an unacceptable risk to the success of the tree crop and could result in the need to replant seedlings at a cost of around \$500/ha. Cost of alternative chemicals is also higher the comparative cost of which will depend on the suite of weeds present to determine which chemicals to use. Shrouded booms may limit crop tree damage but this is not standard practice due to rough terrain and would represent an estimated doubling of application costs.	<b>LOW:</b> Risk of toxicity from Amitrole to immediate environment is eliminated, however the risk associated with alternative pesticides needs to be considered. Reduced efficacy of alternative weed control approaches may increase prevalence of pest weed species.	<b>LOW:</b> Risk of toxicity from Amitrole to surrounding environment is eliminated, however the risk associated with alternative pesticides needs to be considered. Reduced efficacy of alternative weed control approaches may increase prevalence of pest weed species.	<b>LOW:</b> Risk of toxicity from Amitrole to forest workers is eliminated, however the risk associated with alternative pesticides needs to be considered.	<b>LOW:</b> Risk of toxicity from Amitrole to humans is eliminated, however the risk associated with alternative pesticides needs to be considered.	<b>MODERATE:</b> High costs and associated financial viability of broad scale weed control programs of alternative pesticides may increase prevalence of pest weed species resulting in non-compliance with legislation regarding weed control.	 While this option has reduced risk to human and environmental safety (all risk is not mitigated due to the need for alternative pesticides and the risk associated with them), the greatly increased cost of weed control affect the broadscale viability of this option. If no herbicides are used plantation survival and growth will be very poor.
<b>Use of Amitrole in compliance with existing regulations</b>	<i>Compliance with regulations</i>	NPV \$634/ha IRR 1004% An IRR of 1000% indicates that the value of the additional wood grown and savings is worth 10 times the cost of the treatment	With the controls in place, this represents an acceptable operational cost and protection of investment. Operations are limited to only sites that require and will benefit from treatment	<b>MODERATE:</b> Risk to environment from Amitrole exists but is reduced through best-practice application practices, including ground-based application only, increased buffer widths to protect downstream water courses and other sensitive environmental assets.	<b>MODERATE:</b> Risk to environment from Amitrole exists but is reduced through best-practice application practices, including ground-based application only, increased buffer widths to protect water courses and other sensitive environmental assets.	<b>MODERATE:</b> Worker risk minimised due to controlled pesticide application procedures including the use of protective personal equipment and pressurised cabins.	<b>MODERATE:</b> Risk to humans of off-site Amitrole contamination will be minimised through best practise operations, including timely neighbour notification programs, ground-based application, and increased buffers on houses and other social infrastructure.	<b>LOW:</b> Use of Amitrole allows for viable weed control programs in compliance with legal requirement	 Low cost, good control of pest weed species, risk to humans and environment mediated by best practice application procedures make this option viable.
<b>Use of Amitrole with additional preventative controls</b>	<i>Control Regime: In high risk environments (e.g. near houses) non-toxic alternatives to be used (e.g. less toxic pesticides, manual weed control)</i>	NPV \$931/ha IRR 452% An IRR of 452% indicates that the value of the additional wood grown and savings is worth 4.52 times the cost of the treatment	Employment of inefficient control measures represents a poor return on operational investment that impacts negatively on the performance of the plantation	<b>MODERATE:</b> Risk to environment is further reduced by the use of alternative weed control measures in sensitive areas. These approaches may include the use of other less hazardous pesticides, or in some cases the use of manual weed control measures (e.g. hand weeding, slashing, ploughing for bare dirt firebreaks).	<b>MODERATE:</b> Risk to environment is further reduced by the use of alternative weed control measures in sensitive areas. These approaches may include the use of other less hazardous pesticides, or in some cases the use of manual weed control measures (e.g. hand weeding, slashing, ploughing for bare dirt firebreaks).	<b>MODERATE:</b> Risk from Amitrole toxicity to spray contractors reduced as less Amitrole will be applied. Increased worker risk associated with increase in manual labour for some alternatives.	<b>LOW:</b> Risk of off-site Amitrole contamination reduced particularly in proximity to neighbour and other sensitive social infrastructure. Potential for increased prevalence of pest weed species due to potential reduced efficacy of manual control programs.	<b>LOW:</b> Risk of non-compliance with legal requirement to effectively control pest weed species.	 Moderate- high cost for application of alternatives, poorer localised control of pest weed species make this option potentially viable in those locations where alternatives are feasible and not cost prohibitive.



Appendix 2a. Calculation of NPV and IRR used in cost benefit analysis

NPV (@5%) and IRR of no Amitrole use to control plantation damaging pests					
Discount Rate	5%				
Net Present Value (\$/ha)	-\$134.72				
Internal Rate of Return (%)	-68%				
Year	1	2	3	4	5
Treatment Costs (\$/ha/yr)	145	0	0	0	0
Details					
Materials	25				
Labour	120				
Predicted Gains (\$/ha/yr)	0	1	1	1	1
Details					
Additional Growth		1	1	1	1
Losses Averted					
Gains - Costs	-145	1	1	1	1
This regime is treated as the control on which to predict 'Additional Growth' for the other regimes hence the \$1 value					
NPV (@5%) and IRR of using Amitrole to control plantation damaging pests in compliance with existing regulations					
Discount Rate	5%				
Net Present Value (\$/ha)	\$634.47				
Internal Rate of Return (%)	1004%				
Year	1	2	3	4	5
Treatment Costs (\$/ha/yr)	70				
Details					
Materials	10				
Labour	60				
Predicted Gains (\$/ha/yr)	0	773	273	273	273
Details					
Additional Growth		273	273	273	273
Losses Averted		500			
Gains - Costs	-70	773			
Additional growth is presented as the Mean Annual Increment (MAI) X Stumpage applicable minus the MAI for no Amitrole use.					
NPV (@5%) and IRR of using Amitrole with additional controls					
Discount Rate	5%				
Net Present Value (\$/ha)	\$930.83				
Internal Rate of Return (%)	452%				
Year	1	2	3	4	5
Treatment Costs (\$/ha/yr)	130	0	0	0	0
Details					
Materials	10				
Labour	120				
Predicted Gains (\$/ha/yr)	0	678	178	178	178
Details					
Additional Growth		178	178	178	178
Losses Averted		500			
Gains - Costs	-130	678	178	178	178
Additional growth is presented as the Mean Annual Increment (MAI) X Stumpage applicable minus the MAI for no Amitrole use.					

## Appendix 3. INTERIM Stakeholder Feedback Report - Amitrole

### Report Overview

The following report provides a summary of the outcomes of the FSC Highly Hazardous Pesticide Derogation stakeholder feedback, including survey responses and additional feedback received from public comments and communication with forest company representatives.

This feedback was used by the independent advisory group in making recommendations to forest managers regarding pesticide acceptance and preferred conditions of use. These recommendations.

### Overall stakeholder response

In total 125 stakeholders have provided feedback on the derogations applications as December 21, 2015. This includes 75 survey respondents and 50 stakeholders who participated through providing public comment and communication with the National Coordinator or forest company representatives. Many survey respondents also provided feedback through other approaches such as email and/or communication with forest company representatives.

The majority of survey respondents were individuals living on or owning properties adjacent to forested areas (63%) as shown in Table 1. These high numbers of stakeholders who live on or adjacent to forest areas was expected given that forest companies primarily approached those stakeholders registered on company databases for stakeholder feedback. The number of survey respondents identifying as being members of environmental groups was lower than anticipated given the typically high level of interest of such groups in forestry issues.

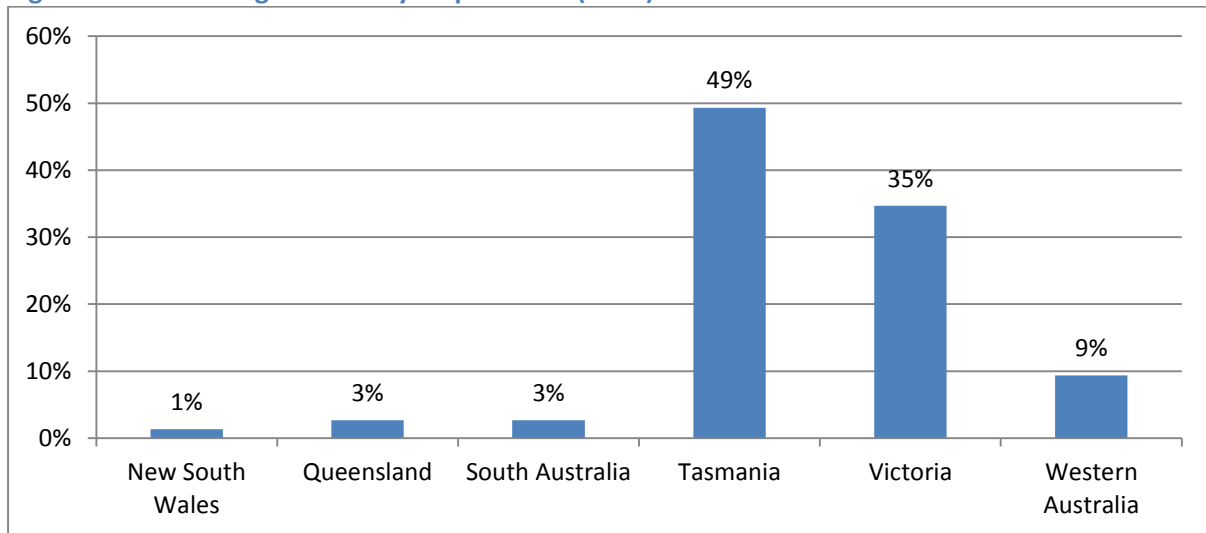
**Table 1: Types of stakeholders who participated in feedback opportunities**

Stakeholder Type (n=75)	No. Survey Responses	% of Survey Responses	No. Comments	Total % of Responses
I am a member of an environmental group with an interest in forestry activities	5	7%	4	7.2%
I am a member of the general public with an interest in forestry activities	10	13%	4	12.8%
I live on a property adjacent to or near a forested area (native forest and/or plantation forest)	22	29%	1	18.4%
I own or manage land adjacent to near a forested area (native forest and/or plantation forest)	18	24%		14.4%
I work, or used to work, within the forest industry	11	15%		8.8%
My business, or place of employment, is impacted by forestry activities	4	5%	4	6.4%
Government	3	4%	2	4.0%
Other, or unknown	2	3%	35	29.6%

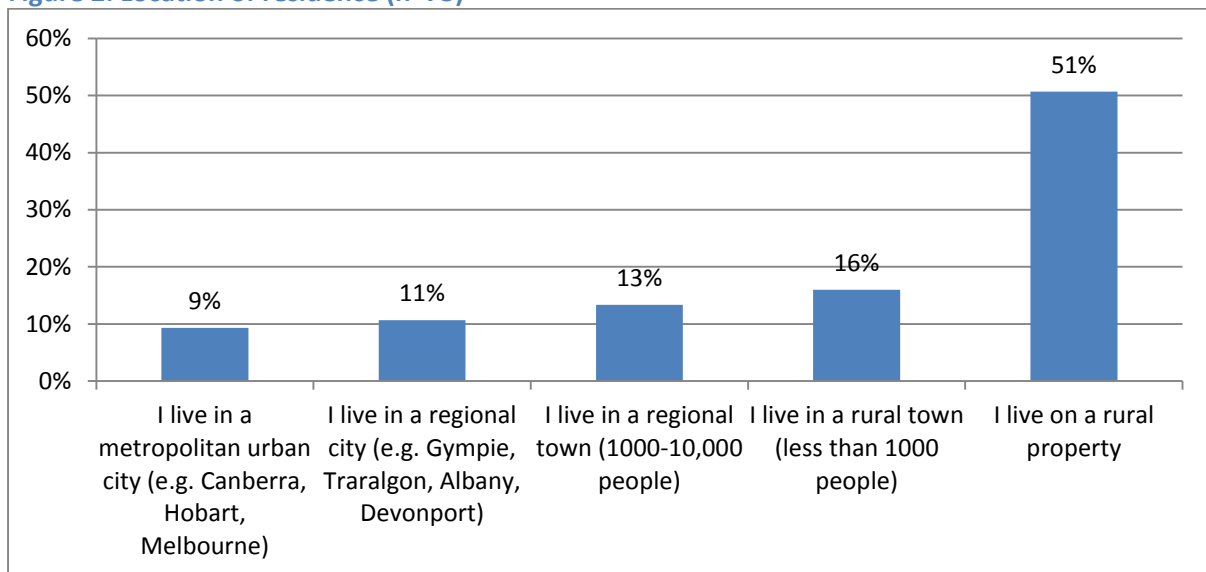
**State of origin (survey respondents only)**

Survey respondents were predominantly from Tasmania (49%), followed by Victoria (35%) and Western Australia (9%) (Figure 1), with very little response from other jurisdictions. The majority of survey respondents were potentially affected stakeholders from rural and regional areas, with 51% living on a rural property and a further 29% in regional and rural towns (Figure 2).

**Figure 1: State of origin of survey respondents (n=75)**



**Figure 2: Location of residence (n=75)**



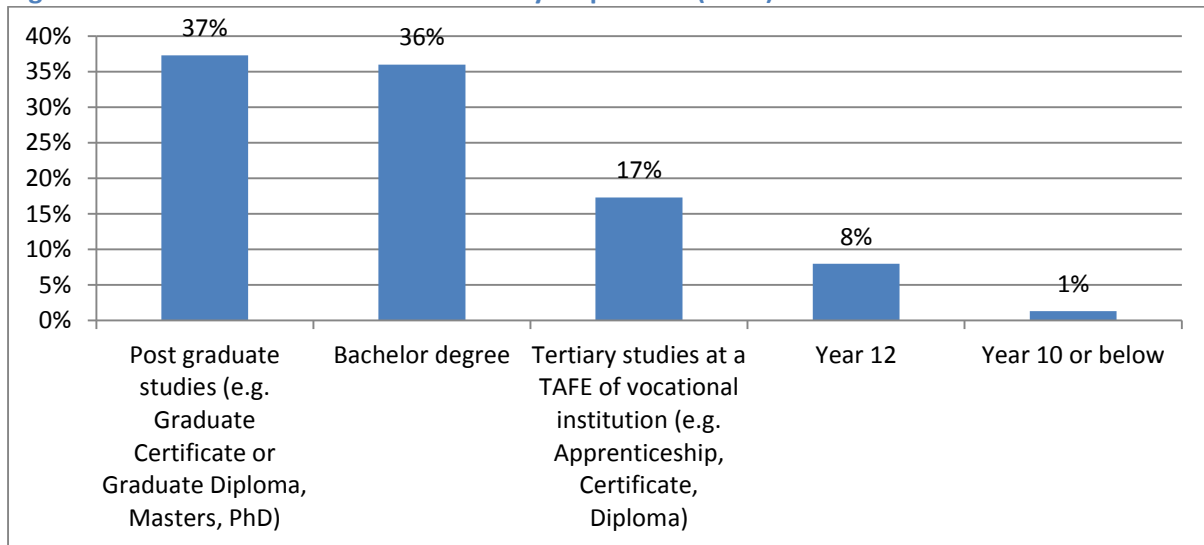
**Survey responder demographics**

Of the 75 survey respondents 41% were female, 55% male and 4% preferred not to state their gender. This represents a higher sample of men to women; however this is a good sample of women, with rural and regional women not often completing surveys pertaining to rural matters.

Survey respondents were highly educated as shown in Figure 3, with 74% of stakeholders have a bachelor degree or higher. While this is not representative of the general Australian public with a substantially higher level of education reported, it is indicative of the education

levels of those individuals interested in forest management with forest managers reporting that this level of education is typical of their stakeholder registers.

**Figure 3: Educational achievement of survey responders (n=75)**



### Stakeholder interest in derogation applications

As indicated in Table 2 the majority of survey comments were in regards to Tasmanian derogation applications. Some stakeholder comments were received for pesticides not under application for that jurisdiction (e.g. 1080 received 5 comments from Tasmania despite Tasmanian companies not seeking a derogation for this pesticide). This widespread interest highlights the level of concern of stakeholders regarding the use of pesticides.

**Table 2: Stakeholder interest in derogation applications by state (n=75)**

Pesticide commenting on*	NSW	QLD	SA	TAS	VIC	WA	Total
1080	0	0	1	5	15	4	25
Amitrole	0	0	1	5	5	2	13
Alpha-cypermethrin	0	1	1	28	5	2	37
Fipronyl	0	0	0	24	7	1	32
Cuprous Oxide	0	0	0	2	8	1	11
Copper Sulphate	0	0	0	2	1	0	3
Picloram	0	0	0	3	2	1	6
Glufosinate ammonium	0	0	0	4	3	1	8
Pindone	0	0	0	4	2	5	11
All Derogation Applications	1	1	1	9	11	3	26
<b>Total</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>86</b>	<b>59</b>	<b>20</b>	<b>172</b>
	1%	1%	2%	50%	34%	12%	

\*Note – due to a change by FSC International derogations are now only being sought for 1080, Amitrole, Alpha-Cypermethrin and Fipronil pesticides

Table 3 provides a breakdown of the company derogations survey respondents provided comment on, highlighting the high focus of stakeholders on Tasmanian and to a lesser extent Victorian forest companies derogations.

**Table 3: Company derogations commented on (n=75)**

Derogations Commenting On	Number of respondents
Albany Plantations Fibre Limited (WA)	14
Hancock Queensland Plantations – HQP (QLD)	8
PF Olsen (Aus) Pty Ltd (VIC, SA, QLD, WA)	20
Australian Bluegums Ltd (VIC, SA, WA)	25
Forestry Tasmania	41
Hancock Victoria Plantations - HVP (VIC, SA)	20
WAPRES(WA)	14
Bunbury Fibre (WA)	13
Forico (TAS)	30
SFM (TAS, VIC, SA)	26
National Coordinator (Pinnacle Quality)	9

### Initiation of stakeholder participation

The majority of survey respondents were attracted to the stakeholder feedback process through invitations received from local forest company(s) or friends (see Table 4). Participation through environmental group dissemination of invitations was very low. Public comment feedback provided some insights into this potential low rate of interest from environmental groups, with a poor perception of FSC engagement processes and hence a lack of interest in participating due to perceived no influence on the process.

**Table 4: Participant involvement initiation (n=75)**

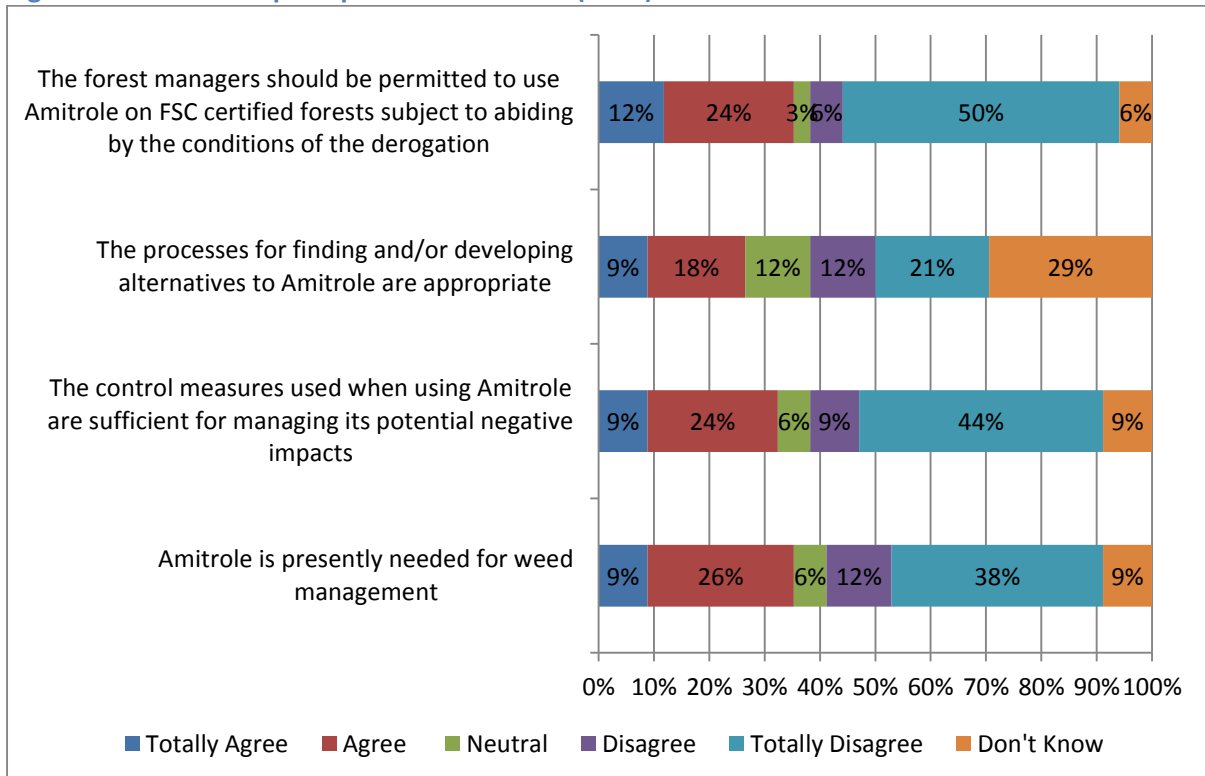
Participation Initiation	Response	% Responses
Direct email invitation from my local forest company	39	52%
Direct email invitation from the National Coordinator (Kevin O’Grady)	2	3%
Forest company website	4	5%
FSC Australia website	4	5%
Information was provided to me from a friend	23	31%
Information was provided to me from an environmental group	2	3%
Information was provided to me from through my place of work	8	11%

### Feedback on Derogation Applications - Amitrole

Survey respondents on a whole are not accepting of the use of Amitrole on FSC certified lands, with 56% of respondents disagreeing with its use and 26% agreeing (Figure 4). This is consistent with the perceived need for Amitrole, with 50% of survey respondents disagreeing that Amitrole is needed for weed management compared with 35% of respondents who agreed that its use is needed.

There was some concern about the sufficiency of the control measures used to reduce risks associated with the use of Amitrole, with 53% of respondents perceiving control measures as insufficient, and 33% as sufficient. There was some uncertainty regarding the acceptability of process to find alternative management approaches with 29% responding that that 'don't know' if approaches are appropriate, 33% perceiving current approaches as inappropriate and 27% seeing them as appropriate.

Figure 4: Stakeholder perceptions on Amitrole (n=34)



The broader feedback on Amitrole was similar to Alpha-Cypermethrin, with many responding stakeholders highly concerned about Amitrole due to it being an endocrine disrupter and hence the potential risks for humans and the environment:

*“Amitrole causes cancer. In 1971 the EPA cancelled the use of Amitrole on food crops. Although the plantations are not food crops, anything that has the potential to cause cancer should not be used in any form whatsoever. It is not worth the risk to human health. ... There is a moderate potential for groundwater contamination - any potential for groundwater contamination makes it therefore inappropriate to use.”*

Some stakeholders understand the increased costs associated with the use of alternative pesticides, but would like to see these costs absorbed by the forest management companies to protect the environment:

*“There can be no 'safe' levels of an endocrine disrupting pesticide in the environment. There are alternatives but the excuse given is they cost more.”*

*That cost needs to be born by forest managers and not the environment and communities by exposing them to an endocrine disrupting pesticide!”*

Other stakeholders see the benefit of Amitrole given that forest managers are experienced in using the pesticide, its use is regulated, and that its inclusion as an allowable pesticide is important to reduce chemical resistance:

*“Good long-standing, safe and reliable chemical that has stood the test of time.*

*“Its use is effectively and efficiently controlled by appropriate local authorities / regulators.”*

*“Can also use glyphosate a little more carefully (so as not to damage crop trees) but it's good to have a range of chemicals to avoid chemical resistance.”*

However, stakeholders expressed the need to ensure controls are in place to ensure risk to no-target area is minimised:

*“Can also use glyphosate a little more carefully (so as not to damage crop trees) but it's good to have a range of chemicals to avoid chemical resistance.”*

Table 5 and Figure 5 compare the acceptance of using Amitrole on FSC certified lands for Victoria and the combination of New South Wales, Queensland, South Australia and Western Australia (due to the low number of respondents within each state these responses were consolidated to retain anonymity).

**Table 5: A comparison of acceptance of Amitrole within Victorian and Western Australian/New South Wales/Queensland and South Australian FSC certified forests**

	Agree	Neutral	Disagree	Don't Know
<b>Amitrole is presently needed for weed management - VIC (n=14)</b>	64%	7%	14%	14%
<b>Amitrole is presently needed for weed management - NSW, QLD, SA, WA (n=8)</b>	50%	0%	25%	25%
<b>The control measures used when using Amitrole are sufficient for managing its potential negative impacts - VIC (n=14)</b>	79%	7%	7%	7%
<b>The control measures used when using Amitrole are sufficient for managing its potential negative impacts - NSW, QLD, SA, WA (n=8)</b>	50%	0%	38%	13%
<b>The processes for finding and/or developing alternatives to Amitrole are appropriate - VIC (n=14)</b>	14%	21%	36%	29%
<b>The processes for finding and/or developing alternatives to Amitrole are appropriate - NSW, QLD, SA, WA (n=8)</b>	38%	0%	13%	50%
<b>The forest managers should be permitted to use Amitrole on FSC certified forests subject to abiding by the conditions of the derogation - VIC (n=14)</b>	29%	7%	64%	0%
<b>The forest managers should be permitted to use Amitrole on FSC certified forests subject to abiding by the conditions of the derogation - NSW, QLD, SA, WA (n=8)</b>	50%	0%	38%	13%

As shown here, Amitrole is more accepted in NSW/QLD/SA/WA than Victoria with 50% of respondents agreeing that Amitrole should be permitted compared with 29% in Victoria, although the low number of respondents means that such findings need to be treated with caution. In all jurisdictions the need for Amitrole and the control measure used is accepted. However respondents are more cautious about the processes for finding alternatives, with a high proportion of survey respondents either disagreeing, or do not know if processes to find alternatives are appropriate.



**Figure 5: Acceptance of Amitrole within Victorian and Western Australian/New South Wales/Queensland and South Australian FSC certified forests**

