



Inquiry into Regulatory Barriers to Regional Economic Development

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Comments regarding Regulation and Regional Victoria Challenges and Opportunities Draft Report January 2005 Victorian Competition & Efficiency Commission

**By Anthony Amis – Friends of the Earth Melbourne
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I would like to include some information regarding some of the issues I have been investigating in regard to tree plantations mostly in South Gippsland, but my interests do include other regions in Victoria as well. The information included will relate to other areas of the state and to other rural industries such as agriculture.

It seems odd to me that plantation growers can claim subsidies that are not afforded to other landowners. These subsidies are also available for herbicide applications used in plantations through the Tax Office.

<http://www.ato.gov.au/individuals/content.asp?doc=/content/43932.htm&page=4>

It would also appear that in some instances plantation forestry receives more favourable tax treatment than alternative land use in many regions. Some private investors can claim 100% tax deductibility in the first year for upfront woodlot management services to be delivered up to 25 years in the future (eg ATO Ruling PR 2002/145). These tax concessions can skew investment strategies with the result being that investment is not strongly influenced by the value and marketability of the final plantation product. Land is also used for less productive purposes.

The value of water is probably worth much more than the economic value of plantation timber, yet plantation expansion continues to roll across the country side without economic modelling being done of the value of water lost due to established plantation consumption and proposed plantation expansion. The impact of commercial plantations on both the environment and existing water users does not seem that be taken into account. This is especially the case in times of drought and climate change. Then economic impact of tree plantations on water quality likewise seems to have been given a wide berth as is the fact that many plantations are owned by “absentee landholders” and the plantations can become havens for noxious weeds which can escape onto neighbouring properties.

In regards to herbicides, a company that we independently monitor, Hancock Victorian Plantations, recently applied for a derogation for the continued use of simazine through the Forest Stewardship Council. The derogation was partially knocked back. But my investigation revealed that SEPP's were being altered without all details concerning pesticide testing and ecological guidelines being determined. With the alteration of the SEPP's in Gippsland being altered, were the local community properly informed, especially those people living downstream of sprayed catchments? Are the impacts of pesticides on native species properly tested for? Are trigger levels for pesticides based on pesticide research carried out in Australia or in

the northern hemisphere where toxicological data does not relate to Australian species?

This submission is basically a collation of information which I have gathered recently. It basically indicates that economic factors regarding trees plantations do not take into account possible incidence of water contamination via pesticide or sedimentation. These costs should be factored into all rural land uses. What are the costs to a community who finds pesticides in their drinking water from an upstream user?

<http://www.hancock.forests.org.au/docs/herbicides.htm#towns>
<http://www.hancock.forests.org.au/directory/otways/map.htm>

Tree plantations also do not pay for their water that their plantations use. This can be regarded as an economic negative, particularly if the plantations are located in water catchments where the price of water services can be very high. Eg health costs etc and who is factoring in the cost of degradation to waterways and freshwater fisheries through unsustainable logging activities in native forests and plantations?

Recreational fishing is worth more than \$1 billion per year to the Victorian Economy yet how is catchment degradation being factored into economic regulation?

<http://www.forest-network.org/Docs/NE2.htm#econfish>

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Issues relating to chemical use by a plantation company

Federal Status of Simazine

In Australia, the Australian Pesticides & Veterinary Medicines Authority (APVMA) is responsible for registering agricultural and veterinary chemical products, granting permits for use of chemical products and regulating the sale of agricultural and veterinary chemical products. Following the sale of these products, the use of them is regulated by State and Territory 'control of use' legislation that is enforced by State Territory Agriculture and Environment Agencies.

There are currently six companies producing Simazine for sale in Australia under the Record of Approved Active Constituents for Chemical Products by the APVMA. All of these companies are located outside of Australia. The minimum compositional standard for active constituents in Simazine is 950g/kg.

The APVMA plays no monitoring role in Gippsland, although they do produce chemical reviews and reports which can lead to a chemical being 'de-licensed'. In regards to Simazine no such review or report has been undertaken by the APVMA, although they are carrying out a review on the use of Atrazine. This review includes an interesting overview of Atrazine issues by the Forest Herbicide Research Management Group (FHRMG).

Results of the Review of Atrazine, including a summary by the FHRMG can be viewed at; http://www.apvma.gov.au/chemrev/atrazine_final.pdf
<http://www.apvma.gov.au/chemrev/attr.shtml>

The Australian government also is responsible for the National Water Quality Management Strategy – Australian Guidelines for Fresh and Marine Water Quality by

the Australia New Zealand Environment Conservation Council (ANZECC) which have stated water quality guidelines for toxicants which include Simazine.

“3.4.2.1 Toxicity data for deriving guideline trigger values. The preferred data for deriving trigger values come from multiple-species toxicity tests, i.e. field or model ecosystem (mesocosm) tests that represent the complex interactions of species in the field. However, many of these tests are difficult to interpret and there are few such data available that meet screening requirements.

Most of the trigger values have been derived using data from single-species toxicity tests on a range of test species, because these formed the bulk of the concentration-response information. High reliability trigger values were calculated from chronic ‘no observable effect concentration’ (NOEC) data. However the majority of trigger values were moderate reliability trigger values, derived from short-term acute toxicity data (from tests ≤ 96 h duration) by applying acute-to-chronic conversion factors”. Page 3.4-2 Water quality guidelines for toxicants. National Water Quality Management Strategy. Australian and New Zealand Guidelines for Fresh & Marine Water Quality 2000. ANZECC.

“A trigger value is defined as a concentration level below which there is a low risk of adverse effects to the environment. When values within the range of the trigger value are reached, this should ‘trigger’ further investigation into the issue, such as more intensive monitoring or a detailed further characterisation of the level of risk.

The trigger level can be applied at different protection levels. The high level of protection is 99%, meaning that this % of species can be expected to be protected if the environmental value does not approach the trigger value.” (Hart et al. 1999)

In regards to Simazine, in their 2000 Version of Australian Guidelines for Fresh and Marine Water Quality, ANZECC (**Table 3.4.1**) provides the following classification for Trigger values for freshwater (UgL-1)*. 4 categories are listed as percentage values for Level of Protection (% species).

*(UgL-1) refers to parts per billion).

○ **SIMAZINE – ANZECC TRIGGER VALUES**
(2000).

99%: 0.2 UgL-1

95%: 3.2 UgL-1

90%: 11 UgL-1

80%: 35 UgL-1

“3.4.2.4 Altering the level of protection for different ecosystem conditions

The trigger values derived using the statistical distribution method were calculated at four different protection levels, 99%, 95%, 90% and 80% (table 3.4.1). Here, protection levels signify the percentage of species expected to be protected. The decision to apply a certain protection level to a specific ecosystem is the prerogative of each particular state jurisdiction or catchment manager, in consultation with the community and stakeholders. State jurisdiction or catchment managers can choose to

apply different levels or protection to different ecosystem conditions if there is confidence that the disturbance is due to an overall physico-chemical disturbance and not just structural alteration. . .

In most cases, the 95% protection level trigger values should apply to ecosystems that could be classified as slightly-moderately disturbed, although a higher protection level could be applied to slightly disturbed ecosystems where the management goal is no change in biodiversity . . . The highest protection level (99%) has been chosen as the default value for ecosystems with high conservation value, pending collection of local chemical and biological monitoring data. The 99% protection levels can also be used as default values for slightly-moderately disturbed systems where local data are lacking on bioaccumulation effects or where it is considered that the 95% protection level fails to protect key test species . . .”

This quote is central to issues concerning water quality in Victoria, especially concerning the State Environment Protection Policies (SEPP's). Friends of the Earth argues that the 100% protection level is required in the Strzeleckis especially in regards to habitat requirements of endangered species such as the Strzelecki Burrowing Crayfish and the EPBC and FFG listed Australian Grayling. It is also FoE's opinion that collection of local chemical and biological monitoring data is lacking in the catchments that Hancock intend to spray with Simazine, however we are willing to work with the ANZECC trigger criteria in this instance.

ANZECC Criteria are relevant to Victoria;

“Victoria has endorsed the NWMS Australia and New Zealand Guidelines for Fresh and Marine Water Quality. The Guidelines specify ‘trigger levels’ (or alert levels) which initiate follow-up assessment when breached” Water Quality Objectives for Rivers and Streams – Victorian EPA 2003.

Victorian Status of Simazine

Numerous State Laws governing pesticide application apply in Victoria. Most specifically the Agriculture and Veterinary Chemicals (Control of Use) Act 1992 and associated legislation.

Most information concerning pesticide applications can be viewed on the Chemical Standards Website: <http://www.dpi.gov.au/Chemicalstandards>

Simazine is not a restricted chemical in Victoria and application of Simazine does not come within Chemical Control Areas. Simazine can also be used as an off label use, meaning that the legal implications if something goes wrong, lies with the user of the chemical and not the manufacturer.

Numerous bureaucracies can be involved when a spraying incident goes wrong. For instance when reporting incidents of spray drift it is recommended that local government, through Regional Health Officers (REHO) and the Department of Human Services be informed. If the local shire does not have a REHO, environmental health officers or the Chief Executive Officer should be consulted. The Environment Protection Authority also has a responsibility in regards to spray

drift issues and pollution incidents through the EPA Act and the SEPP's. However the EPA will often only get involved if there is a complaint and not all pesticide usage is monitored by the EPA or anyone at all for that matter.

It is Friends of the Earth's experience that monitoring of pesticide residues from plantations in Victoria is extremely limited and the following response to a Freedom of Information Application makes for interesting reading seeing that under the Code of Forest Practices, the local shire is the responsible authority for logging activities on private land;

"6/12/02. FOI Request – Colac Otway Shire Council

In response to your request for information relating to the use of herbicides by plantation companies, I advise that there are no records within Council, as plantation companies are not yet required to advise either Council or the Department of Natural Resources and Environment of their intentions to conduct herbicide application.

*Yours sincerely,
FoEI Officer Colac Otway Shire"*

Friends of the Earth does understand that notices of spraying operations have sometimes been granted to local residents and local government authorities in the Gippsland region by Hancock, but further details about such notices are limited. Our organization also has been sent some data from Gippsland Water pertaining to some pesticide regimes conducted by the Hancock from 1999 to 2001. But this information is scant and it was impossible to draw any information from Australian Paper Plantations (APP) about their pesticide regimes –especially when chemicals are mixed together.

"Sep/Oct 2001. Pine plantation logged by Australian Paper Plantations and aerially sprayed by Grand Ridge Plantations Pty Ltd on 21 September 2001. According to John Cameron, General Manager of Grand Ridge Plantations in a letter to Friends of the Earth dated 2 October 2001. "The herbicides used were Simazine, Lontrel & Verdict. The formulation is not available in granular form". Mr Cameron also included a sheet entitled Environmental Precautions Helicopter Spraying which included the point "All Permanent streams are sampled to confirm free of contamination". A letter sent by FoE to Mr Cameron sent October 15, 2001 asked in regard to the above point, 'When samples were taken, who took the samples, how often the samples were taken and where the sampling took place?' FoE also asked for a written copy of the sample results. FoE is still waiting for a response to the letter".

http://www.hancock.forests.org.au/docs/logging_practices_update-10-11-2001.htm

In regards to Water Quality Objectives for Rivers and Streams in Victoria by the Victorian EPA p2 *"Water quality objectives therefore refer to: perennial rivers and streams and non – urban areas. There is currently insufficient data available to derive objectives for intermittent/episodic streams, lakes, wetlands and estuaries".*

Much of the spraying in Victorian plantations occurs near and in intermittent streams and drainage lines. Furthermore existing controls for chemical use under the Victorian Code of Forest Practices are quite weak;

“3.1.2.6 Weed Control: Goal: The control of competition from grasses and other weeds in plantations should be encouraged to promote the efficient and economic production of timber. Such control measures should not compromise environmental standards” Code of Forest Practice – November 1996.

Many areas draining plantations are not granted buffers or filter strips, meaning that the possibility of downstream pollution is increased, especially after high rainfall periods.

State Environment Protection Policies (SEPP's)

State Environment Protection Policies (SEPP) are declared by the Governor in Council under Section 16(1) of the Environment Protection Act 1970. *“SEPP's provide a framework for environmental decision making and a clear set of publicly agreed environmental objectives that all sections of the community must work together to achieve”*. Victorian Government Gazette S122 22/10/96 page 19.

In 1996 there was a variation of the State Environment Protection Policy (Waters of Victoria) – Waters of the Latrobe and Thomson River Basins and Merriman Creek Catchment that would have ramifications for plantations controlled by Hancock.

Waterways in this definition mean a river, creek, stream or watercourse or a natural channel in which water regularly flows, whether or not the flow is continuous or a lake, lagoon, swamp or marsh.

The SEPP for Waters of the Latrobe and Thomson River Basins and Merriman Creek then listed Segments;

Segment B (predominantly forests and forestry activities): The surface waters of –

- (i) Moondarra and Tyers State Parks
- (ii) Holey Plains State Park and freehold land enclosed by this park
- (iii) Latrobe and Ada River and their tributaries upstream of their junction
- (iv) Thomson River and its tributaries upstream of Cowwarr Weir
- (v) Toorong River and its tributaries
- (vi) Loch River and its tributaries
- (vii) Avon River and its tributaries upstream of Wombat Flat
- (viii) Carey River and its tributaries
- (ix) Barkly River and its tributaries upstream of the junction with Tiger Creek
- (x) Glenmaggie Creek and its tributaries upstream of Back Creek Track
- (xi) Stony Creek and its tributaries upstream of the junction with the Thomson River
- (xii) Valencia Creek and its tributaries upstream of the junction with Stony Creek
- (xiii) Rintouls Creek and its tributaries upstream of Fitzgibbons Road
- (xiv) Eaglehawk Creek and its tributaries upstream of Eaglehawk Creek Road
- (xv) Freestone Creek and its tributaries upstream of George Creek

- (xvi)Tyers River and Jacobs Creek and their tributaries upstream of the wall of Moondarra Reservoir
- (xvii)Tanjil River and its tributaries upstream of the wall of Blue Rock;
- (xviii)Wellington River downstream of Carey State Forest

But not including any of the surface waters of Segment A

Segment C (mixed forestry and agricultural activities). The surface waters of –

- (i)Latrobe River and its tributaries upstream of its junction with the Moe Drain
- (ii)Tanjil River and its tributaries upstream of its junction with Latrobe
- (iii)O’Grady Creek and Little Morwell River and their tributaries upstream of their junction
- (iv)Morwell River and Morwell River East Branch and their tributaries upstream of their junction
- (v)Middle Creek and Vaggs Creek and their tributaries upstream of their junction
- (vi)Billy Creek and its tributaries upstream of Jeeralang Road Bridge
- (vii)Bennetts Creek and Waterhole Creek and their tributaries upstream of the Churchill-Traralgon Road
- (viii)Traralgon Creek and its tributaries upstream of Jones Lane
- (ix)Flynn’s Creek and its tributaries upstream of Callignee South Road
- (x)Macalister River and its tributaries downstream of the Caledonia River and the wall of Glenmaggie
- (xi)Avon River and its tributaries from Wombat Flat downstream of Redbank
- (xii)Perry River and its tributaries upstream of Perry Bridge and
- (xiii)Merriman Creek and its tributaries.

(It should be noted that most of Hancock’s existing hardwood plantations fitted under Segment C – although Hancock is currently converting areas of pinus radiata to shining gum in many places that may also have fitted under Segment B & D. It is presumed however that Simazine was highly likely to be used in Segment C ‘plantations’).

In the verified 1996 SEPP for the Latrobe and Thomson Rivers and Merrimans Creek, details were given on In-stream Water Quality Indicators and Objectives. Details were given about toxicants (formula) Max; stating that in Segment B levels had to be <0.2T* and in Segment C levels had to be <0.5T*. (Friends of the Earth assumed that these values translated to 0.2 meaning 20% of the T Value and 0.5 meaning 50% of the T value).

***As of 4 June 2003 (p42 Victorian Government Gazette – S107) the 0.2T and 0.5T values were replaced with the T Value. “Part 3 – Variations of Schedules of SEPP (Waters of Victoria) Schedule F – Policy Variations. 6. Variations or Schedules F5, F6 & F7. (1) The following schedules area varied (a) SEPP (Waters of Victoria) Schedule 5 Waters of the Latrobe and Thomson Rivers and Merrimans Creek by replacing 0.2T & 0.5T, whereby they exist, with T in Table 3.4.1 of the Australian Guidelines for Fresh and Marine Water Quality 2000. In addition to replacing the objective, the decision and assessment process outlined in the Principle Policy is triggered if the T value is exceeded”.**

THIS RECENT RECLASSIFICATION OF THE T VALUE BY THE STATE GOVERNMENT WILL IMPACT MOST SIGNIFICANTLY IN THE SEGMENTS B, C & G OF WATERWAYS COVERED BY THE 1996 LATROBE AND THOMSON RIVERS AND MERRIMANS CREEK S.E.P.P. FOR SEGMENTS A, D,E & F THERE WILL BE NO CHANGE.

EFFECTIVELY THE BRACKS GOVERNMENT HAS ALLOWED FOR THE DOUBLING OF PESTICIDES ENTERING WATERWAYS BEFORE THE TRIGGER LEVEL IS IMPLEMENTED IN RIVERS AND STREAMS OF SEGMENT C OF THE 1996 LATROBE AND THOMSON RIVERS AND MERRIMANS CREEK S.E.P.P.

IN REGARD TO IMPLEMENTING THE TRIGGER FOR TOXIC POLLUTION ENTERING WATERS THAT WERE COVERED UNDER SEGMENT B & G* OF THE 1996 ‘LATROBE’ S.E.P.P., THIS HAS EFFECTIVELY QUINTRUPLD ALLOWABLE LEVELS OF TOXIC POLLUTION BEFORE THE TRIGGER LEVEL IS IMPLEMENTED.

*(The reclassification of the T value will also impact on Segment G of the SEPP – Wetlands surrounding Lake Wellington and McLennan’s Strait, parts of the LaTrobe River, Dowds Morass State Game Reserve, The Heart Morass , the Sale Common Game Refuge and Lake Reeve south-west of the Causeway).

T (as defined by S107 Waters of Victoria 4/6/03 Government Gazette is “T in Table 3.4.1 of the Australian and New Zealand Water Quality Guidelines for Fresh and Marine Water Quality (2000). . . (2) Where the Australian Water Quality Guidelines for Fresh and Marine Waters has been referenced, the 2000 version needs to be used. The level of ecosystem protection that needs to be used to determine the objective is:

- (a)99% for “largely unmodified”, “natural” and “substantially natural” aquatic ecosystems;*
- (b)95% for “modified” ecosystems;*
- (c)90% for “highly” or “largely modified” aquatic ecosystems.*

As defined in table 3.4.1 denoted as level of ecosystem protection (% species). . .”

Thus the following freshwater triggers are currently legal when applying Simazine in Victoria. This will be the same for areas within the Latrobe and Thomson River and Merrimans Creek SEPP and areas outside the Latrobe SEPP.

- **S.E.P.P./ANZECC TRIGGERS FOR SIMAZINE**

99%: 0.2 UgL-1

95%: 3.2 UgL-1

90%: 11 UgL-1

Under the 2003 Revised SEPP the waters of Victoria are defined as Segment Definitions. The (b) Forests A segment consists of the upland river and stream reaches in the . . . Latrobe and Thomson catchments and streams in the . . .

Strzeleckis. This segment has minor disturbance, is mostly forested and is generally about 400 m in altitude but also includes some coastal area.

Another segment which may include Hancock plantations is (d) Cleared Hills and Coastal Plains . . . lowland river and stream reaches and their catchments in the . . . Latrobe, Thomson, Macalister, Mitchell . . . and river and stream reaches in South Gippsland. This segment has a high level of disturbance, is generally extensively cleared, with some isolated remnant native forests and . . . cleared hills are generally above 200m.

The 2003 Revised SEPP (p39) for the Waters of Victoria also lists a table (A4):

Environmental Quality Objectives for rivers and streams & estuarine & marine segments in water column & sediments.

**Forests A (Strzeleckis): Non-Metal (Max) T99%.
Cleared Hills and Coastal Plains Non-Metal (Max) T99%.**

Therefore under the new SEPP, trigger T values of 99% are required by law.

It is FoE's submission that under Forest Stewardship Council certification we demand that the highest protection level be warranted for the use of Simazine, meaning that maximum Simazine residues entering waterways must not go higher than 0.2 UgL-1. Ideally we would argue for zero residues. 0.1 UgL-1 as stated in Victorian law up to June 2 2003 would be our next best choice. But independent water monitoring of areas draining sprayed areas is an absolute necessity.

Also of major concern is that other herbicides used by Hancock in Victoria namely; Sulfometuron Methyl, Metsulfuron Methyl, and Haloxyfop are not listed under ANZECC Guidelines for Fresh and Marine Water Quality. Hexazinone is listed but the trigger levels are listed under ID – Insufficient Data. (A lot of chemicals listed in this data base come up as ID. How can we determine the potential economic costs of a pesticide if there is ID? Also, who is doing the water monitoring across the state in the first place to determine what those impacts are?

Glyphosate has trigger levels of 370 UgL-1 (@99%), 1200 UgL-1 (@95%), 2000 UgL-1 @ (90%). These levels seem exceedingly high, especially considering the recent research by the RMIT University has revealed that the acute toxicity of Roundup to two week old *C. destructor* (freshwater crayfish - Australian Yabby), ranged between 0.4 and 8 mg glyphosate/l (120 hour LC50) with interbrood variability. The recommended agricultural application rate for Roundup which is 5-7ml/l at the rate of 2-3 l/ha (Monsanto, 1986) may therefore pose an ecological risk to Australian freshwater crustaceans. Australian native freshwater crustaceans are more sensitive to this herbicide than similar Northern Hemisphere species.

FoE also has concerns that plantations sprayed with 2,4,5-T between the years 1968 and 1977 are now being logged. It may be possible that the Dioxin TCDD may still be present in the soil (and sediment) of these plantations. This Dioxin could also be

leached into local waterways – especially after rainfall. ANZECC guidelines for 2,3,7,8 - TCDD is ID (Insufficient Data).

“For TCDD there may be no safety factor (U.S. EPA., 1979a; 1979b)” The Herbicide 2,4,5-T and its use in Forestry. Peter Rawlinson Zoology Dept, Latrobe University, Bundoora, 3083.

WHO ARE THE POLLUTERS AND HOW COULD THEY PAY? (Source: Total Environment Centre 1998).

While regulatory authorities in Australia are often quick to assume community and non government organizations (NGOs) that pollution is not occurring, or if it is, it is only isolated incidents, it is obvious that at least in the case of these three (Endosulfan, Chlorpyrifos, Atrazine) registered and reviewed pesticides, widespread environmental contamination has occurred. In Australia, there is no nationally coordinated program for the environmental or biological monitoring of agricultural chemicals to gauge the extent of environmental contamination.

The 1997 Aquatech review (Aquatech “Monitoring of the Environmental Effects of Agricultural and Veterinary Chemicals in Australia – Preliminary Investigations” Submitted to Environment Protection Group 1997) of environmental monitoring of agvet chemicals in Australia reported that:

- “No current national environmental monitoring programs were identified”.
- “No centralised data collection points were identified” and
- “there is no existing list of chemicals of environmental concern in Australia”

A national environmental monitoring program would provide the information base on which to judge the frequency and severity of pollution and set the priorities for addressing it. While NGOs had lobbied hard for the inclusion of agricultural chemicals in the National Pollutant Inventory introduced in 1998, this was defeated and the subsequent commitment to an AGVET Usage Database has not been realised...

So how could the polluter(s) responsible for ongoing, diffuse pollution be identified? The user of agvet chemicals claims that the pesticides they use, are registered by the National Registration Authority (now called the APVMA) who are advised by the Department of Health, Environment Australia and the national occupational authorities. The pesticide’s use is controlled by State based control use legislation and is overseen by either agricultural departments or the State EPA. So unless both understands and then wantonly disregards the label warnings, he can not be the polluter? Industry associations and governments are often quick to claim ‘misuse’ as the problem but this is just as often vigorously denied by the farming community and pest operators. As the NSW Pesticide Act acknowledges the inability to adequately forecast rain or control wind direction, this cannot be defined as ‘misuse’.

The producer of the pesticide may argue that he cannot be the polluter as the chemicals are registered by the appropriate government agencies at the time of use. Even in the case of the organochlorine pesticides or persistent organic pollutants (POPs) where many manufacturers were fully aware of the persistence of their products and their resultant environmental contamination, there has been no requirement or liability for the clean up of POPs stockpiles or POPs contaminated sites. However, the national agricultural chemicals acts clearly state that in relation to any loss or injury from constituent or product, it is not a defense to claim that the NRA had registered the product or issued a permit or license. It is also highly

unlikely that NRA could ever be identified as the polluter, as the legislative disclaimers (For example, see Section 15 Crown not liable to prosecution, AGRICULTURAL AND VETERINARY CHEMICALS ACT 1994, Section 38 Exemptions from liability for damages, AGRICULTURAL AND VETERINARY CHEMICAL PRODUCTS (COLLECTION OF LEVY) ACT 1994, Section 69H Exemptions from liability for damages, AGRICULTURAL AND VETERINARY CHEMICALS (ADMINISTRATION) ACT 1992) included throughout the national agricultural and veterinary chemicals legislation ensure that the staff and board of the NRA could never be found responsible for any loss or injury directly or indirectly suffered as a result of their registration of the pesticide.

So if the polluter can not be identified as the user, the regulator, either State or Federal, the manufacturer or producer, then there is only one stakeholder left, that is, the consumer. As we have so often been told, no-one would create, register and use the products if the consumer did not wish it. There are major flaws in this argument. Firstly, the consumer or the general community are rarely asked for their opinion and they are not provided with a range of information that allows them to make an informed choice. However, they may just respond with 'well, I'm not an expert and they wouldn't register it if it wasn't safe!'

And even if the party responsible for widespread environmental contamination could be identified how does the polluter pay? Given the difficulties to restore a biological system once it is disrupted or remediate groundwater once it has been contaminated, the assessment of payment in the terms of the loss (loss of biodiversity, loss of habitat, loss of topsoil, etc) is difficult to make. The payment is, at the end of the day, probably a monetary one. Rarely can monetary compensation make up for biological loss or loss of a resource such as underground water. In reality, to some degree at least, the polluter can never pay the real cost of their pollution even when some restoration is possible. And the expression 'the polluter pays principle' is misleading because in the end, it is us the final consumer who must pay.

It has been suggested that this could be addressed by ensuring a potential polluter pays up front prior to the activity that may pollute. That way in order to remain competitive, they will make considerable efforts to minimise pollution, however this is unlikely to be a politically acceptable response. For many environmental and public NGOs, this dilemma can only be solved by the regulatory agencies taking another principle to heart, that of the Precautionary Principle. This would go some way to ensuring that in those cases where the evidence clearly indicates a real potential for environmental contamination such as in the case of endosulfan, atrazine and chlorpyrifos, the regulator would withdraw those products from the market. This may mean changes in agricultural practices and even increased production costs in the short term, but in the end it will still be the consumer who will pay. Hopefully, the price of our pollution will not be the wholesale irreversible contamination of the Australian environment.

Nature for Sale
Forest/Plantation privatisation in Victoria, Australia (Aug 2004).

Anthony Amis - Friends of the Earth Melbourne
Susie Zent - Friends of Gippsland Bush

Neo-liberal policies supporting the privatisation of state assets have been the fashion in Australia for the past two decades. An example of this has been the privatisation and sale of 180,000 hectares of ex government controlled plantation/native forest lands in Victoria and the up and coming sale of 270,000 hectares of plantations in New South Wales. These sales are occurring despite very significant management issues that remain unresolved, meaning that corporate buyers inherit the same problems as their government predecessors. Corporate control does not necessarily mean an improvement in management practices.

In basic terms privatisation has delivered;

- a) less accountability
- b) less legislative control
- c) less community participation in the decision making processes
- d) less public disclosure of assets, wood volume and contractual arrangements.

Industry at every opportunity, has attempted to undermine any critical analysis of their operations using all manner of bullying tactics and the use of Public Relations to mitigate for any disasters. It is very rare that the broad community has any substantial gains as far as conservation and environmental outcomes are concerned.

In 1990 the Victorian Labor State Government embarked on an agenda to corporatise the State's Plantation Assets. This policy accelerated when the right wing Kennett Liberal Government was elected in 1992. In 1993 the Kennett Government 'relinquished' control of the states plantations and created the Victorian Plantation Corporation (VPC). This corporation was granted its own legislation and also came under the State Owned Enterprises Act 1992.

The VPC controlled about 170,000 hectares of land throughout Victoria. About 98,000 hectares was pinus radiata plantation, with an additional 7,000 hectares being hardwood 'plantations/reafforestation in the Strzelecki Ranges in south east Victoria. The remaining 65,000 hectares of VPC land contained road reserves, dams, infrastructure and native forests. VPC land also contained old growth forest and cool temperate rainforests in the Strzelecki Ranges.

The VPC legislation allowed the forests to be excised from the land and the leasehold, held in perpetuity, allows for harvesting and establishing of plantations on that land. That is what the legislation requires so any other use requires a change in legislation.

VPC also benefited from the Victorian Code of Forest Practices which was redrafted in the mid-1990's. The Code essentially was designed to make it very difficult to enforce. This was done largely to placate the interests of the major paper company

operating in Australia, Amcor (now called PaperlinX) who had established approximately 55,000 ha of plantations and controlled 27,000 hectares of non-plantation land in the Strzelecki and Gippsland regions of Victoria.

The Code is only enforceable through;

- a) VCAT (Victorian Civil and Administrative Tribunal). A loss at VCAT could set community groups back \$50,000 per hearing as legal costs are very likely to be awarded against the party that loses.
- b) a strong committed council which is willing to demand that the environmental care principles- the basis of the code be implemented, and
- c) voluntary negotiated outcomes between industry and the authority. Occasionally these include full community participation when it suits the company. Once it encroaches on industry's economic assets, the mood of the industry changes markedly. The ecological and economic costs to the local and regional communities is never assessed. This relates to water quality, roading degradation, impact on local communities etc.

Alterations to the State's Planning Scheme in 1993 meant that local councils and not the state government were made responsible for enforcing the Code of Forest Practice on private land. Several Local Councils do the best that they can with extremely limited resources, but many do very little. One legal battle which Friends of the Earth won in 1995 concerning private land logging in a domestic water supply catchment, revealed that the local council had not even been on site for 10 years! Private land is essentially exempt from any due process where full community participation is accepted as part of the process.

The Flora and Fauna Guarantee Act (FFG) supposedly protects threatened species and communities throughout Victoria, however the FFG Act does not apply to private land unless the minister declares it be "critical habitat" essential for the survival of a particular species/community. To date this has not occurred in any location in the State.

VPC activities through most of Victoria had been confined to their pine plantations. Unseen and unknown, very little public scrutiny or interest had been invested in understanding the plantation industry. From the 1960's until the mid 1980's pine plantations had been controversial, due largely to the State Government and companies clearing native vegetation for plantation establishment. This practice was largely stopped by State Government laws in 1988.

VPC activities in the Strzelecki Ranges were also under little public scrutiny. There had been protests in the region against clearance of native vegetation for plantation establishment up until the late 1980's.

There had also been controversy in the South Gippsland town of Yarram in the late 1970's where a cluster of birth deformities had been associated with the herbicide 2,4,5-T and its use as a weed control by the Lands Department and the Forests Commission. Locals had also successfully stopped the use of 1080 baits (sodium monofluoroacetate) in 1990.

In 1997 locals found that VPC had been expanding their hardwood plantations by logging high conservation value old growth forests and cool temperate rainforest buffers. This came as a shock to the community who thought that the VPC was a plantation based operation. Complicating this again, was the confusion in clarification of hardwood plantations.

Between 1950 and 1990, Indigenous reforestation had taken place in the Strzeleckis in areas that were surrounded by existing native forest. For all intents and purposes much of the supposed hardwood plantation appeared to be native forests. The logging of non-plantation trees, under the guise of plantation logging, infuriated locals and it was this act that was one of the catalysts for community monitoring taking place in the Strzeleckis. The VPC act did not clarify what was planted forest and what was not. The VPC Act actually allowed VPC to log everything within their land boundaries.

The most highly controversial development however were plans by Amcor to clear 2000 hectares of native forest to establish plantations in the northern Strzelecki and Gippsland regions. This development raised the ire of state and national groups and was eventually defeated largely through the efforts of Friends of Gippsland Bush by an agreement negotiated with Amcor in 1997.

The tragedy of the Strzelecki's is that it is well recognised that past clearing practices have left the entire Bioregion depleted of its original vegetation cover and less than 2% remains protected in reserve status. On public land the Comprehensive Regional Assessment system requires a minimum of 16%.

Much of the VPC hardwood areas in the Strzeleckis contained remnant areas of cool temperate rainforest, which faces an uncertain future on mainland Australia. This forest type is extremely susceptible to wildfire and the disease Myrtle Wilt. If wildfire burns a stand of rainforest, that stand will not regenerate as rainforest. Rainforest therefore requires large buffer zones of eucalypt forest to protect it from the effects of wildfire.

Cool Temperate Rainforest also requires large buffer zones to minimize impacts of tree fall which can wound Beech trees, allowing the wilt pathogen, which is air (and water) borne, to enter wounds in the trees. Buffer zones for cool temperate rainforest on private land are not mandatory. This loophole written into the Code of Forest Practice, therefore offers very limited protection for cool temperate rainforest in the Strzeleckis.

Complicating matters again is that past mis-management of rainforests in the Strzeleckis has meant that in some areas plantations have been established right up to the edge of rainforest stands, meaning that when plantation logging occurs, the risks of wounding beech trees and stirring up the Myrtle Wilt spores are increased substantially. These plantations are also open to the effects of wind throw, where high winds can whip through a recently cleared plantation, and knock over remnant trees. We have documented instances where radiata pine trees have fallen into cool temperate rainforest, destroying that rainforest.

The Strzeleckis is also home to the Strzelecki Koala, a genetically diverse strain of Koala from which other koala populations throughout south east Victoria have been sourced. Other populations of koala are suffering from the impacts of low genetic diversity which in turn has led to inbreeding and genetic weakness. The Strzelecki Koala does not suffer from these traits. As the Strzeleckis were replanted with indigenous trees between 1950 and 1980 (after massive clearing between 1880 & 1930) the Koalas in many instances have moved back into many planted areas.

With all of these problems, a subsidiary of John Hancock Financial Services, the Hancock Timber Resource Group, purchased rights to log the assets of VPC in October 1998. Hancock Victorian Plantations was therefore established and given rights to log under a 99 year old leasehold agreement. Ownership of the land was retained by the State, but for intents and purposes the land was privately owned. Hancock also inherited the problems that had confronted VPC. Locals launched the news that they were unhappy with this privatisation by launching an international campaign against the role of Hancock in purchasing the assets of a poorly operating company. (See Hancock Watch <http://www.hancock.forests.org.au>)

In August 2001, with many issues of Strzelecki forest management left unresolved, Hancock purchased the 80,000 hectare assets of Australian Paper Plantations (APP). All of APP's land were based in the Gippsland and Strzelecki regions of Victoria. APP also had bad relations with environmentalists. Most of the areas in the northern Strzeleckis that were not under the control of VPC, now came under the private ownership of Hancock. These lands were not leased but purchased as private land. About 20,000 hectares of native forest was included in the sale, now meaning that Hancock purchased or leased about 250,000 hectares of land throughout Victoria, of which 80,000 was native forest.

Thanks to the efforts of local Strzelecki campaigners, Hancock embarked on a voluntary moratorium of not logging native forests within its land base, however this moratorium did not extend into areas of indigenous plantations that had the appearance of 30-40 year old native forest. It also meant planted areas located in close proximity to cool temperate rainforest would continue to be a headache for the company and conservationists alike.

In 2000 Hancock announced that they would be embarking of Forest Stewardship Council (FSC) certification of the assets that were priorly owned by VPC. Smartwood, an FSC certifier took on the task. Many people felt that the certification was premature in that many management issues had not been resolved. Due to the APP takeover in August 2001, this delayed the certification again, as some of the managers Hancock inherited from APP were not too supportive of FSC initiatives.

Some forest campaigners also took the view that FSC would be a breathe of fresh air, in that Hancock would have to lift their game significantly and this in turn could lead to more positive outcomes in the Strzeleckis. Complicating this agenda was that the Australian Government had set up their own certification scheme – The Australian Forestry Standard – which had been dismissed by the Australian environment movement as being a sham. FSC was seen as a way to undermine the AFS. Hancock was awarded FSC certification in February 2004, the first FSC certification awarded in Australia. Forest campaigners are still waiting for the improved management and

community relations which are supposed to be the hallmark of FSC. Many campaigners remain sceptical that Hancock will be able to retain the certification due to their stubborn refusal to acknowledge community concerns.

It should also be pointed out that privatisation of the plantation base in Victoria, practically means that the purchaser of such an asset does not have to pay for the water that these plantations consume. Estimates from Friends of the Earth Melbourne, suggest that Hancock plantations may be using in the vicinity of 1.3 million million litres of water per year. Water prices were not factored into the sale price and prices of water, where the plantations are located, fluctuate between \$20 ML (ML=1 million litres) to \$800 ML. Effectively, Hancock over 99 years, will be granted billions of dollars worth of water subsidies in the driest continent on earth. Much of Victoria has been in drought since 1992 and further rainfall decreases of 30% per annum are expected under greenhouse effect scenarios.

Plantations established prior to Native Vegetation Retention legislation or Code of Forest Practice do not require a plantation establishment notice to be lodged with the responsible authority. Therefore 2nd and 3rd rotation plantation establishment means business as usual for the industry. Monocultures originally established in the wrong locations such as on unstable highly erodible soils adjacent to watercourses and sensitive vegetation including critical habitat are therefore exempt from environmental constraints forever. Such clearing leads to massive soil erosion which in turn impacts on rivers and creeks that drain the plantations.

The other effect of plantation management is that plantations are logged on short rotations of approximately 30 years. Logging can create soil erosion problems, which in turn can create very turbid waterways. The biggest threat facing native fish in Australia is habitat loss and sedimentation of waterways. Friends of the Earth has determined that at least 15 species of native fish lie downstream of Hancock operations in Victoria. Many of these species are threatened and logging and spraying activities will not improve this situation.

The other major worry for freshwater ecosystems is the application of herbicides post logging. The plantation industry in Victoria is heavily reliant on aerial spraying. The plantation herbicide of choice in Victoria is the triazine Hexazinone which is a known groundwater contaminant. Other herbicides used include; Glyphosate, Metsulfuron Methyl, Sulmeturon Methyl, Terbacil, Clopyralid, Triclopyr and the fungicide Copper Oxychloride. This is a concern for human health as about 1 million people in rural Victoria have plantations located in their domestic water supplies, which are sprayed post logging by Hancock. These people have few rights in opposing aerial and ground application of pesticides in their drinking water catchments.

DRINKING WATER

The issue of pesticide use is very serious in regards to instream ecosystems, but what of the people who have to drink the water that is supplied from areas that have been sprayed? We have determined that over 130 regional towns in Victoria have plantations located in their drinking water catchments. Perhaps the most heavily utilized plantation catchment is the Gellibrand River catchment in the Otway Ranges. What onus is on plantation companies to safeguard against practices that may lead to the lessening of water quality to excessive sedimentation or herbicide use. South West Water has admitted that plantations in the Gellibrand catchment pose a very high risk to water quality. How many plantations are properly monitored after logging and spraying takes place? Are the results of such monitoring made public? Why should a company be subsidized to pollute? If the AMA is concerned about this matter in Tasmania, what about Victoria?

WATER QUALITY A MAJOR PUBLIC HEALTH ISSUE - AMA

The Federal AMA's Public Health Committee has recommended that water quality should be treated as a major national public health issue following examination of a Tasmanian report into the effects of aerial spraying in water catchment areas.

AMA Federal Councillor and President of AMA Tasmania, Dr Michael Aizen, briefed the Committee at its weekend meeting on the report's observations regarding the water supply in the St Helen's region of Tasmania.

Dr Aizen said today the St Helen's report, which had been prepared by a water scientist and a local GP using locally collected health data, was submitted to the Tasmanian AMA for consideration.

"Both the AMA in Tasmania and the Federal AMA's Public Health Committee agree that there were a number of serious methodological flaws in the report. The document fails to demonstrate increased evidence of adverse health effects, including cancer rates, in the St Helen's region of Tasmania," Dr Aizen said.

"The report has, however, sparked wider interest in the issue of water quality and human health, and this is a good thing.

"The Tasmanian AMA, for example, is now taking a more active role in the Tasmanian drinking water guideline review.

"We know that substances used in agriculture and for domestic and industrial purposes are potentially toxic to the environment through contamination of water supplies, by leaving residues in the animal and human food chains, and through pollution of the atmosphere.

“In each case, there is a potential for human health to be adversely affected.

“The AMA will raise with governments at the Federal and State levels the need for quality control of air, water and food supplies to ensure the maintenance of a healthy ecology for the sustenance of human life.

“When an activity raises threats of harm to the environment or human health, precautionary measures should be taken.

“A good start would be to minimise the contamination of drinking water with any chemical or pollutants and limit agricultural and industrial activities in water catchment areas. Where these activities are permitted for any reason, then environmental and human health impacts should be independently monitored,” Dr Aizen said.

Dr Aizen said he wants to see the water quality initiatives of the Tasmanian AMA taken up by the AMA on a national basis.

28 February 2005

http://www.aph.gov.au/senate/committee/rrat_ctte/completed_inquiries/2002-04/plantation_forests/submissions/sub90.pdf

The committee should look at the above submission for concerns by the Australian Medical Association regarding impacts of pesticides on human health in Tasmania. **(Please note that some of the estimations in the following submission need to be ‘fine tuned’, especially in regard to costings of water used by plantations. Given that a huge water consumption by plantations can limit other opportunities of economic growth downstream of those plantations. Also note that some plantations are thinned during their management regimes, which will lessen water consumed, however it is my contention that the amount of water used by Hancock and other plantation companies is enormous.) – amis 3/3/05**

SENATE COMMITTEE ENQUIRY INTO PLANTATIONS AND THE 2020 VISION

CC:

THE SECRETARIAT

**SENATE AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE
SG62 PARLIAMENT HOUSE, CANBERRA ACT, 2600.**

SUBMISSION FROM ANTHONY AMIS – FRIENDS OF THE EARTH MELBOURNE.

I have been involved in forestry issues at Friends of the Earth (Melbourne) since 1988.

In that time I have worked on native forest issues, but for the past 5 or so years I have been interested in looking at the ecological impacts of the established and burgeoning plantation industry.

Part of my motivation has been to see some sort of environmental outcome for the Strzelecki Ranges – located 2 hours south east of Melbourne.

STRZELECKI BACKGROUND

After being almost totally cleared by ‘settlers’ in the late 19th Century, a large portion of the Strzeleckis was ‘replanted’ through various reforestation schemes from the 1940’s to the 1980’s, primarily to satisfy the demands of the Maryvale Pulp Mill owned by Australian Paper Manufacturers/Amcor/PaperlinX.

The plantations/reafforested areas were grown more as a pulp resource, rather than a sawlog resource, hence the reason why approximately 80% of the timber coming from the region is woodchipped. These plantations generally have a poor sawlog quality,

although there was a sawmill established in 1997 to take benefit of the so-called hardwood sawntimber from the Strzeleckis. This mill went broke after it could not recoup the \$20 million which was required to set it up – due also to lack of sawntimber demand. We also understand that the mill was sourcing timber from non-plantation trees growing within the plantation boundaries that were under the control of Victorian Plantations Corporation. This ‘dishonest’ use of plantation land raised the ire of many locals in the region.

Thus the Strzeleckis has possibly the oldest established plantation hardwood areas in Australia. People delving into the plantation industry must need to understand issues confronting this area, to get an idea of the long term futures predicted by many now embracing the plantation expansion ‘ideal’.

Much of the hardwood area now being ‘targeted’ by the industry is in the northern slopes of Strzeleckis on approximately 8000 hectares of land leased to Australian Paper Manufacturers under the 1961 Wood Pulp Agreement and many more thousand hectares of land privately purchased by the company which was also under the control of Australian Paper Plantations. Generally these trees are less than 40 years old. Other land also being logged is plantation land established by the Forests Commission and then corporatised through the Victorian Plantations Corporation and then effectively privatized when the sale to Hancock Victorian Plantations went through in November 1998. I should also point out that Australian Paper Plantations were also sold off to Hancock Natural Resource Group in 2001 – effectively meaning that Hancock now control 250,000 hectares of land throughout Victoria, with approximately 120,000 hectares of that land in the Gippsland and Strzelecki Region.

Importantly the soils of the region were little understood when the clearing initially took place and the reforestation commenced. As a result, large portions of the Strzelecki plantations were established on very steep slopes on highly erodable soils. This is leading to sedimentation issues on a very large scale which in turn impact on creeks and streams of the region, including waterways that eventually drain into the Gippsland Lakes. The Gippsland tourism industry is worth about \$40,000,000 to the states economy and the impacts of sedimentation on waterways has been well documented by the site Hancock Watch;

www.hancock.forests.org.au

I recommend that members of this committee get acquainted with this particular website as it contains a wealth of information concerning plantation developments in Victoria. Hancock operate throughout Victoria in the following regions; South West Victoria, Otways, Ballarat Region, Central Region, Benalla Region, Ovens Region, Upper Murray Region, Strzelecki Ranges, Central Gippsland and the Mitchell River catchment in Eastern Gippsland.

I have also been extremely concerned about the impact of plantations on water quantity and the impact of herbicides and associated toxicants associated with the plantation industry. It is generally considered that plantations located in areas of 1000mm rainfall per year use 9 million litres (ML) of water per hectare per year. A large portion of the Strzeleckis Ranges and Otway Ranges lie above 1000 mm rainfall areas. Generally though, the bulk of Hancock’s plantations throughout the State lie in

the 700 mm rainfall range, so the water yield from these plantations will be more likely to be in the vicinity of 6 – 7 ML per hectare per year. Some plantations have also been located in areas under 600 mm rainfall per year.

Because plantation trees are kept forever young, they consume large amounts of water. Most plantation trees under Hancock's management are cut at a 28 year rotation. It was previously 34 years, but that rate has come down significantly in the past few years. Plantation trees generally are more thirsty from the ages of 5 to 15 years. Water use slows down significantly at about 35 years, but the plantation trees rarely last that long. Water yield can increase for a year or two after logging, however water quality at this time is highly likely to suffer from very large increases in sediment. In some cases up to hundreds of tones of sediment can be washed away per hectare. If heavy rainfall occurs post logging and if the plantation is located on steep slopes then all sorts of water quality problems can occur, especially in plantations where there are next to no buffer zones protecting drainage lines and ephemeral streams that drain from the plantations. It should also be remembered that logging roads are the main cause of sediment entering waterways over a rotation length and there is usually a high density of logging roads in plantations. This in turn can impact negatively on streams and creeks that lie downstream. As a recreational fishermen I can concur that sediment problems can cause enormous problems with freshwater species.

Hancock control 250,000 hectares of land throughout Victoria. Approximately 170,000 hectares of this land is plantation. Probably (a) 20,000 hectares of 'plantations' lie above 1000mm, with (b) 100,000 hectares located in the 700mm zone. The rest, possibly (c) 50,000 hectares lie in lands of under 600mm rainfall per year. Working on this assumption, Hancock plantations would consume approximately (a) 180,000 ML + (b) 700,000 ML + (c) 250,000 ML of water per year. All up my estimation would be 1,130,000 ML (1130 GL Giga Litres*) of water per year.

*Gigalitre = 1000 ML (Hancock's Murray Basin operations amount to 50,000 ha x 6 (ML/Yr = 300,000 ML = 300 GL/yr). Efforts to get decent environmental flows into the Murray Darling Basin could well be thwarted by existing softwood plantations and newly established plantations located in the wrong location. This problem will be magnified by the clearfelling of old growth forests in the headwaters of streams flowing into the Murray Darling Basin.

Water prices vary throughout Victoria where Hancock's plantations have been established. The highest rate of water cost would be in the Geelong region where water is currently priced at \$728 ML. Other water, in the west of State would be worth only a few dollars per ML. Using a conservative estimate, water costs could be averaged at \$100 ML across the state, potentially meaning that Hancock could be using \$113 million worth of water per year. Hancock were granted a 99 year lease from the State Government, meaning that when that lease has expired Hancock trees would have used \$11.2 billion of water, valued at today's prices! They are not paying a cent for this water!

I would recommend that the Senate Committee carry out an independent water quantity review for Victoria's privatized plantations. It is a very strange situation

where people from Victoria, New South Wales and South Australia end up effectively subsidizing a multi-national insurance company. With recent rumours that State Forests NSW will be selling off their plantations to Hancock, it is not entirely impossible that Hancock would be receiving a \$30 billion water subsidy by the year 2100 – given that State Forests NSW control some 300,000 hectares of plantations throughout New South Wales. This appears to be an unmentioned factor when considering further plantation establishment and the impacts of globalisation.

Privatisation of the plantation resource is an economic disaster under this scenario. Why should a US based privately owned company receive such enormous water subsidies at the cost of all downstream users? Many of the plantations in NSW are located in the Murray Darling Basin. In Victoria approximately 50,000 hectares are located in the Murray catchment – many of which however are located in the headwaters of Rivers and streams. These include the mainly Avoca, Wimmera, Loddon, Acheron, Ovens and Cudgewa Creek catchments.

This figure assumes that water prices will keep stable at the current prices, which of course they won't. Under Greenhouse Effect scenarios we are likely to see a decrease in rainfall in Victoria and a warming of something like 3 degrees Celsius by the year 2030. Under these scenarios the price of water should skyrocket. I understand that farmers in the Murrumbidgee catchment were paying upwards of \$250 ML this year with drought – some irrigators were paying almost \$1000 this year alone!.

http://www.theaustralian.news.com.au/common/story_page/0,5744,6583482%25E12810,00.html

A large portion of the states plantations have been located in the headwaters of river systems. I would argue that these plantations have been located in the worst possible location in terms of waterways and the generation of decent environmental flows. Poorly located plantations will draw up a huge amount of water, slowing down the flow as the young trees grow. These plantations will also deny rivers much needed flush outs of salt, potentially worsening salinisation in some areas. Of course tree plantations can lower water tables in certain catchment locations and plantations may well be beneficial when grown in the proper locations, however it is my contention that many of Hancock's existing plantations were not grown to control salinisation, they were grown as 'woodchip farms'. Hydrological concerns in many instances may not have been properly factored in. In some cases the locations of existing plantations could be considered to be poorly planned land management 'mistakes' that we will continue to pay for, for decades.

I should also point out that the worst thing the Federal and State Governments should be doing in regard to water quality and quantity is to continue to log old growth forests. This situation is especially the case in Tasmania where old growth forest is being replaced by thirsty plantations. This short term land conversion for the woodchip industry is unforgivable and extremely ignorant. Regrowth forests will also consume vast amounts of water post logging, however native forests managed on longer rotations will eventually use less water over a longer period of time, in comparison to a plantation that is logged every 30 years or so. Some experiments have been carried out which show that water yield from a logged plantation and a logged native forest are similar after 30 years. However these experiments would have to be

carried out for 100 years to get a clearer picture on the long term impacts. For instance three rotations of plantations would be grown within a hundred years, whereas you would be very lucky to get one and a half rotations in a native forest managed for sawlogs. The plantations are kept forever thirsty, whereas forests managed for sawlogs would slow down their water use at about 35-40 years and continue to do so until they are logged at 80 years.

The 2020 Vision.

From the perspective of Friends of the Earth Melbourne, most of our attention has been focused on the existing plantations in Victoria. Very little of our work has looked at the role of new plantations grown as part of the 2020 Vision.

However it would be fair to say that our organisation has been critical of the Vision ever since its inception in 1996. The Vision was not based on ecological factors, it was based on economic theory. Inappropriately located plantations will cause problems. Most of the growth of the plantation sector in Victoria appears to be occurring in the South West of the State in the Green Triangle.

Many of these plantations are bluegum and approximately 100,000 hectares of blue gum have been established in the Green Triangle region since 1996. Much of this new plantation expansion has occurred in the Glenelg River system and on land that was originally grasslands and woodlands – not forest. Existing water yield data has been determined by the CRC for Catchment Hydrology who have concluded that in regions of 1000mm rainfall per year new plantations will use about 2ML/ha/yr above what was being used by pasture. So it could be claimed that water yield in these south western catchments will be reduced by <200,000 ML per year (2000 GL). This change in land use will have the most impact in dry years and drought. It is also very possible that groundwater will be lessened by having large catchment areas converted to bluegum plantations. These new plantations will undoubtedly reduce surface water in the downstream vicinity of the plantations. The south west of Victoria contains many wetlands. Many of these wetlands may be threatened by lack of water in the future. Such a water reduction will also impact on native title claims.

Friends of the Earth also fears that there may be a market glut in bluegum woodchips over the next 5 years as there was an exponential growth in the amount of plantations established between the years 1996 – 2000. At the same time woodchipping of native forests has escalated in Tasmania and Eastern Victoria, so the argument that these plantations have stopped the logging elsewhere is a complete furphy.

In regards to herbicides Friends of the Earth has a number of concerns over the use of herbicides in plantation forestry. Most of these concerns relate to the continuing use of Triazine herbicides such as Simazine, Atrazine and Hexazinone. We understand that numerous new bluegum plantation companies use Simazine and we are currently having to deal with Hancock Victorian Plantations wanting to continue to use Simazine in the Strzelecki and Gippsland regions of Victoria.

I have included a document that I have recently compiled about Simazine in regards to the recent derogation by Hancock towards Forest Stewardship Council

certification. As a member of FSC FoE is keeping a close eye on developments of FSC in Australia.

Our current plantation policy can be viewed at;

<http://www.jeack.com.au/%7Emartdy/Docs/Plantations.htm>

Yours truly,

Anthony Amis

Friends of the Earth Melbourne 2/9/03.

*****PRESS RELEASE*****

18/1/05

PLANTATION LOGGING IN THE OTWAYS NEEDS SERIOUS ATTENTION

Environmental organisation Friends of the Earth had today expressed concerns over plantation forestry logging in the Otway Ranges, particularly in proclaimed water catchments.

Friends of the Earth Plantations Research Officer, Anthony Amis said; “Recent observations by Friends of the Earth raised particular concerns particularly in the Gellibrand Water Supply Catchment which supplies drinking water to Warrnambool and numerous towns in western Victoria. Particular concerns were raised about Midway Plantations Pty Ltd.”

“From our observations, it would appear that plantation companies are generally getting away with very poor environmental practices. It would also appear that because plantations are classed as private land, local government are hamstrung to properly monitor logging due to lack of resources” Mr Amis said.

“Friends of the Earth hold grave concerns for water quality in the Gellibrand catchment, particularly for the township of Gellibrand which has several hundred hectares of plantations located in its water supply which is sourced from Lardners Creek. After logging, hardwood plantations can be sprayed with pesticides such as Simazine which is a known groundwater contaminant, developmental and reproductive toxin, possible carcinogen and suspected endocrine disruptor. Who in their right mind would want this chemical sprayed near their drinking water?” Mr Amis asked. “Softwoods are usually sprayed with Hexazinone, a highly soluble herbicide and a known groundwater contaminant”.

Mr Amis also criticised the Code of Forest Practice, which allows plantation companies to reestablish plantations in very close proximity to waterways. “In some instances unscrupulous plantation companies are replanting trees within one of two metres of waterways. This means that there is no buffer of native vegetation to protect water quality from the impacts of chemicals and sediment. Increased sedimentation of waterways can play havoc with freshwater species and create a situation where more chemicals are required by water authorities to make the water suitable for consumption.”

“Another concern for Friends of the Earth is the use of insecticides in newly established hardwood plantations. Some of the new hardwood plantations are being planted on old pine plantation sites and others on old farmland. Hardwood plantations sometimes require aerial application of insecticides such as Alpha-Cypermethrin

which is highly toxic to fish (including Blackfish) and is a suspected endocrine disruptor in humans. Insecticides could be used several times per year during infestation. It is not impossible for a concoction of chemical to wash into waterways particularly during heavy rainfall” Mr Amis added.

“Many of the plantations in the Gellibrand Catchment and Otways were established in the mid 1970’s. These are the plantations that are likely to be clearfelled over the next few years. Some of these plantations were established with very limited attention placed on site location and water supply concerns. The worst located plantations are those located in close proximity to waterways, on steep highly erodable slopes, and on highly erodable soils such as Cretaceous Sediments.

“We need an urgent overhaul of the Code of Forest Practice, which gives plantation companies a very wide berth in regards to protecting water quality and we need investment companies that are financing new plantations to realise that in some cases the new plantations will actually cause more problems than they will solve. Plantations should not be established in domestic water supply catchments as they will reduce streamflow particularly in low rainfall years.” Mr Amis concluded.

Insecticide Controversy

In May, the Portland Observer ran a story concerning Friends of the Earth’s concern that widespread application of insecticides would soon occur in the Portland region in order to protect recently established bluegum plantations. FoE’s concerns centred on the fact that these insecticides can cause very serious health concerns to nearby residents, downstream water users and neighbouring businesses such as farms. Up to 100,000 hectares of bluegum plantations have been established in south western Victoria and south eastern South Australia since the mid 1990’s. If insect attack occurs several applications of insecticide can occur every year for several years.

The response from people attacking FoE’s argument was severe, with most criticism coming from Timbercorp and industry consultant Dr Barry Tompkins. Interestingly comments from bluegum company Integrated Tree Cropping (ITC*) more or less supported FoE’s position, where they stated that “*large scale insecticide use is detrimental to the environment and community*”. This issue was also controversial in south western Western Australia in 2000, where the state government, due to public outcry, had to introduce a moratorium on the use of the insecticide Dimethoate, a moratorium which still stands. Dimethoate is a known developmental and reproductive toxin and Cholinesterase Inhibitor (effects nervous system). It is also a possible carcinogen and potential groundwater contaminant. Dimethoate use is currently under review by the Federal regulatory body the APVMA.

The bluegum industry in Western Australia largely uses Alpha-Cypermethrin, a ‘supposed’ safe alternative. Bluegum plantations in Western Australia did not suffer widespread insect attack until 1994, almost 10 years after bluegums were first introduced to the region. FoE believes that similar outbreaks won’t occur in south western Victoria until 2005-6. The most common insect defoliators found (so far) in Victorian bluegum (*E. globulus*) and shining gum (*E. nitens*) plantations include; **Wingless Grasshopper** (*Phaulacridium vittatum*), **Autumn Gum Moth** (*Mnesampela privata*), **Leaf Blister Sawfly** (*Phylacteophaga froggatti*), **Steelblue**

sawfly (*Perga affinis affinis*), **Christmas Beetles** (*Anoplognathus* spp.), **Leaf Beetles** (*Paropsis* spp. and *Chrysophtharta* spp.) and **blue gum psyllid** (*Ctenarytaina eucalypti*).

FoE has major concerns about the impacts of insecticides on the Crawford River catchment in south western Victoria. The Crawford is a highly significant river in that it contains three threatened native fish species, Ewen's Pygmy Perch, Yarra Pygmy Perch and Dwarf Galaxias. Alpha-Cypermethrin is highly toxic to freshwater species and the Crawford River has been inundated with bluegum plantations in the past few years.

This issue then went off the boil for two months, until the release of the Scammell report on the effects of aerial spraying of insecticides and herbicides on newly established tree plantations in north eastern Tasmania. Scammell's synopsis was that serial spraying (using helicopters) appears to be responsible for large-scale losses of commercial oysters following heavy rainfall events, when the sprays are washed down the catchment into the inter-tidal zone where the oysters are farmed. More disturbingly, the problems associated with oysters also correlate with tumours and mortality in Tasmanian Devils, which are currently suffering from a plague which has killed 100,000 devils since 1996. Interestingly, the spray mostly suspected of killing oysters was the supposedly safe Alpha-Cypermethrin. Scammell's report caused mayhem in Tasmania and was widely reported throughout mainland Australia. You can download the report at http://www.tfic.com.au/scammell_report_07.04.htm

The 2020 Vision launched in 1996 planned to treble the amount of plantations in Australia by 2020. The Vision has always been criticised by FoE Forest Network. It would now appear that problems are starting to emerge with this largely unregulated industry. The nightmare scenario remains that we still have 16 years left of the plantation expansion experiment. Local communities and environment are likely to suffer the most from the ill founded strategy. Tasmania will get a double whammy because not only does Tasmania have a large rural per capita population, but they also log old growth forests and replace these amazingly complex ecosystems with plantation monocultures. Native forest conversion was largely stopped in Victoria in the late eighties. (*ITC was recently awarded Forest Stewardship Certification – for their bluegum plantations in Western Australia, South Australia and Victoria. They are the second company in Australia to be awarded FSC).

ISSUES CONCERNING TIMBERCORP PLANTATIONS

FOREST STEWARDSHIP COUNCIL ASSESSMENT

FRIENDS OF THE EARTH MELBOURNE

JULY 20, 2003.

Compiled by Anthony Amis (Friends of the Earth Forest Network)
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Friends of the Earth (FoE) are very concerned about the proposed assessment of Timbercorp's Plantations by FSC. We will be more supportive of the assessment if the concerns listed below will be addressed by the assessors and company. Friends of the Earth Australia are members of the FSC.

We are concerned that because of the lack of a National FSC standard, plantation companies such as Timbercorp could take advantage of Interim standards, thereby potentially weakening plantation standards throughout Australia.

We are happy that Smartwood are undertaking the assessment and believe that Smartwood have worked in a positive manner in regards to the only other FSC Assessment in Victoria thus far, Hancock Victorian Plantations. We do however hold some concerns about Smartwood's Australian plantation standard which we believe is still evolving as more information comes to hand.

We are concerned that Timbercorp is applying for an FSC assessment without going through an FSC scoping first. If the scoping has been done it has not taken place in Victoria. This lack of due consultation in Victoria could therefore reflect poorly on the whole process.

Before supporting the proposed Timbercorp Assessment we would like the following points resolved;

- a) We understand that Timbercorp have 29, 790ha of E. globulus plantations in south-western Victoria. Although we have limited understanding about the location of some of these plantations, we are unsure of the exact location of the majority of the holdings. Most of our information comes from Timbercorp

plantations established in the Portland catchment – especially those located near the Heywood-Woolesthorpe Road. We therefore request more information on the exact locations of all of Timbercorp's plantations to be provided to us via maps.

- b) Working on the assumption that 1 hectare of plantations consumes 2 ML (megalitres) of water per hectare per year, above what is used in grasslands/pasture, we can assume that Timbercorp plantations are consuming almost 60,000 ML of water per year above what would have been used recently by the pasture that these new plantations have replaced. It is also assumed that these plantations will continue to consume at least this amount of water indefinitely.
- c) Given that most of the plantations are established in areas where rainfall falls on average 700mm per year, we further estimate that in total these bluegum plantations would use in the vicinity of 7 ML/per ha per year. This means that Timbercorp's current water usage would amount to possibly 210,000 ML per year. This massive water consumption occurs across 5 catchment areas; Glenelg, Millicent Coast, Portland, Hopkins and Corangamite. Timbercorp are not paying for this water and FoE believes that the impact of these plantations in times of low rainfall and drought, may seriously impact on waterways and wetlands of the western districts. (see Appendix 7) Friends of the Earth would like more information from the company and the assessors about the impacts of bluegum plantations on water quantity in the region and we believe that this issue must be addressed properly via the FSC assessment.
- d) With Greenhouse Effect scenarios probably meaning a reduction in rainfall in south western Victoria, water issues will become increasingly important over the next 30 - 100 years. It is imperative that FSC address this issues and we hope that a hydrologist with experience in plantation development will be consulted during the FSC assessment. We recommend that Rob Vertessy be approached.
- e) FoE also is worried that if Timbercorp is given the FSC certificate then they may embark on further plantation expansion. If the water isn't addressed now, then huge problems may emerge with future plantation expansion.
- f) This impact on water yield will also be of concern to Gournditchjmara native title claimants. Although plantation companies operate on 'private land', plantations will impact on water yield downstream in areas currently under review for native title claims. Reduced water yield may well impact on the creatures that inhabit wetlands and waterways which in turn effects native title; eg impact on fisheries etc. We therefore call on the assessors to meet with the Gournditchjmara Native Title Claimants as soon as possible to discuss the implications of their bluegum plantations.
- g) Much of Timbercorp's estate is located on lands that were once grasslands. In terms of hydrological impact, more work needs to be done to determine what the long term impacts of such intensive plantation management will have on these indigenous natural landscapes. (It should be noted that Timbercorp's holdings in the Portland catchment west of the Merri River to Darlots Creek and south of the towns of Penshurst and Heywood were mainly located on country that was once basalt shrubby woodlands, stony knoll shrubland, plains grassy woodland, plains swampy woodland, aquatic herbland and herb rich foothill forest). It is FoE's belief that intensive plantation monocultures are likely to have an 'unnatural' hydrological impact in these regions as well.

- h) FoE has concerns about the impact of forestry herbicides on the soils and wetlands of Victoria's south west. FoE has concerns about the impact of Roundup on freshwater crustaceans. We categorically oppose any certification for companies using chlorinated herbicides. We understand that Timbercorp currently use Simazine, which is both a chlorinated herbicide and a groundwater contaminant. Simazine is also noted by Pesticide Action Network (http://www.pesticideinfo.org/PCW/Detail_Chemical.jsp?Rec_Id=PC34340) as a possible carcinogen, a developmental or reproductive toxin and a suspected endocrine disruptor. We would need to know more details about the current herbicide use by the company. FSC guidelines state that certification will be granted to companies that reduce their use of chemicals – how can we address this matter when we don't have any details about Timbercorp's current chemical regimes! (see also Appendix 9). Our organization has major concerns about Timbercorp's current and potential spraying regimes. Comments made by company spokespeople in the West Australian newspaper are also of major concern.
- i) FoE has concerns about the potential use or misuse of insecticides if the plantations come under serious insect attack. We believe that aerial spraying may occur and we would oppose any aerial spraying of herbicides and insecticides by forest companies. If this occurs it will reflect very badly on both Timbercorp and the FSC. Problem insect species already recorded in eucalypt plantations in Western Australia include; Spring Beetles (*Liparetrus* and *Heteranix* spp), African Black Beetle (*Heteronychus arator*), wingless grasshoppers (*Phaulacridium vittatum*), locusts, autumn gum moth (*Mnesampela privata*), eucalyptus weevil (*Gonipterus scutellatus*), Chrysomelid beetles (*Chrysopharta* spp., *parapsis* spp., *Trachymela* spp., *Cadmus excrematalis*, Native Budworm (*Helicoverpa punctigera*), Weevils, Rutherglen Bug (*Nysius vinitor*), Pasture Day Moth (*Apina callisto*), Lief Tier Moth (*Decophoridae*), Bluegum psyllid (*Ctenarytaina eucalypt*), Leafblister Sawfly (*Phylacteophaga froggatti*). Friends of the Earth will oppose rampant insecticide use of insecticides such as chlorpyrifos. We would like to know of Timbercorp's existing insecticide regimes in the region.
- j) FoE has concerns about lack of archaeological studies of private land in the vicinity of what could be considered to be some of the oldest archeological sites on the planet. FoE understands that the remnants of 'dreaming tracks' occur on private land in the vicinity of Lake Condah and are concerned that Lake Condah and surrounds – including the wetlands stretching through to Tyrendarra have not been properly assessed prior to planting to bluegum plantations where the land is ripped and mounded. This intensive plantation development could seriously threaten archaeological sites in the area. An excellent article was recently published in the Sydney Morning Herald March 13 'Secrets of the Stones' which highlights the national significance of the Lake Condah region..
- k) FoE has major concerns about potential certification for Timbercorp plantations when logging of their plantations hasn't even started. We understand that logging will not start until 2008. This sets a very poor precedent in that a logging company could be awarded certification without even starting to log. What sort of message does this send out? We fear that the certification is being rushed through so that either Japanese woodchip

buyers can be assured that their woodchips are from FSC sources and that potential investors in new paper mills in either south west Victoria or south western Western Australia will be assured that there will be little environmental problems with these projects in terms of wood procurement. (see appendix 1).

- l) In line the point (k), the impacts of logging on local communities and local road infrastructure cannot be determined until logging starts. We have no idea of the amount of log trucks that will be needed to haul plantation bluegums to the export dock at Portland, and the impact that these trucks will have. We also understand that a pulp mill is being mooted for the region. The exact location is unknown and once again what impacts will many log trucks have on the local infrastructure of the region? Further details about potential truck movements need to be made public by the company.
- m) FoE has concerns about the possibility of genetic pollution occurring with remnant stands of native vegetation in the region. This genetic pollution would mean potential cross-pollinisation with species such as *E.camaldulensis* and *E.viminalis* which occur in the region. This issue will become a serious problem with companies planting bluegum and shining gum in or around remnant vegetation. FoE has already observed remnant redgum woodlands with Timbercorp plantations located very close by west of Hamilton. Our organization would be very interested to see how FSC and Timbercorp will attempt to grapple with this issue as it is likely to be a problem unique to Australia. (See: Genetic Pollution from Farm Forestry using eucalypt species and hybrids – Sept 2001 RIRDC Publication).
- n) FoE has concerns that bluegum plantations could harbour pests and vermin which could in turn be problematic for local landholders (See Appendix 4).
- o) Our organization is also worried about the impact of broadscale plantations on local farming communities. Although it appears that the economy in some towns may benefit, we are unsure whether the considerations of all local people are being considered when plantations are foisted onto local communities. Does FSC want to be associated with plantation companies that are causing problems in some communities? (See Appendix 5). These issues will magnify if insect attack occurs and if the water yield issue is not resolved.
- p) If fertilizers are going to be used on Timbercorp plantations, what is the source of the fertilizers and do they contain industrial waste including heavy metals? What quantity of fertilizers will be used on these plantations and what type of fertilisers will be used, including the manufacturing company. (See Appendix 6).
- q) Many people involved in our organization are still angry about Timbercorps' role in the destruction of Red Tail Black Cockatoo breeding sites in 2000. This was an outrageous mistake by the company and we are not entirely convinced that Timbercorp were as innocent as they appear to be in this fiasco. Some members of our group remain upset that a company that could have pushed this bird over the edge of extinction is now going for Forest Stewardship Certification. (See appendix 8). Soon after this information went public our group decided to conduct a direct protest action at Timbercorp's head office in Melbourne. Timbercorp were mysteriously tipped off about this protests and security guards were waiting at the entrance of the building as we arrived. This indicates to us that our group could have had Timbercorp informants at our meeting. How else would have Timbercorp found out about

our groups activities? Nevertheless we still managed to get a 40 minute hearing from Timbercorp's Executive Director Robert J. Hance. Timbercorp basically put the blame of clearing red tail black cockatoo nesting sites on the local DNRE and local shire, who according to Hance had not informed Timbercorp that there were nesting sites on the land before they established their bluegum plantation. It should also be pointed out that the local council told FoE that Timbercorp were told that the area was significant and Timbercorp cleared it anyway.

- r) FoE believes that Timbercorp must get all of their land holdings assessed by 'independent' ecologists/biologists. This assessment should include the creation of 1:25,000 EVC maps that will be made available to the certifiers, interested parties and local government authorities. This maps must also include known archaeological sites and all remnant wetlands/swamps/grasslands. Both flora and fauna surveys must be included and need to be an ongoing concern.
- s) FoE also believes that Timbercorp should be reinstating natural vegetation on all of their plantation areas. Local trees and plants are bound to appear once cattle and sheep have been removed from old pastures. These regenerating plants should be retained and not destroyed when plantation logging is carried out. FoE would like to see Timbercorp instate a 35% revegetation policy within their land holdings after the first rotation of bluegums are logged. See FoE Forest Network website for further details.
(<http://www.jeack.com.au/%7Emartdy/Docs/Plantations.htm>)
- t) FoE would like further information about the role of Silvagene (based at the development section of LaTrobe University) in Timbercorp's plantations and Timbercorp's links with the Centre for Forest Free Technology in Heidelberg, Melbourne. More specifically we would like to know what Timbercorp is planning in regards to genetic engineering of tree species. FoE is fundamentally opposed to the genetic engineering of life.
- u) FoE also has concerns about fire risk associated with the plantations. Although the plantations may not be much of a fire risk in small grassland fires, what happens if a massive bushfire occurs in the region? We fear that many of the bluegum plantations in an intense fire and under the right circumstances could fuel an even more massive fire with extremely destructive capability. Recent bushfires in Bluegum plantations in the LaTrobe Valley showed that bluegums can be explosive if the fire is large enough. These fires will be very difficult to contain.
- v) We are interested to here about soil issues in regard to the certification. Our information suggests that Western Victoria – near Casterton has similar soils to those in the Strzeleckis and Otways. These soils would be highly erodable. We would like further information regarding the work that Timbercorp has done in regards to assessing the soils that its plantations have been established on in Western Victoria.

- **Appendix One**

- **New Paper Mill for Victoria/South Australia?**

From Border Watch 2/1/01

Mill War - Portland and Hamilton enter the fray.

The South East is embroiled in a tug-o-war to wrest a possible billion dollar paper mill from Victoria, after the State Government announced a \$50,000 capital injection to kick start major marketing strategies.

The Southern Grampian and Glenelg Shires have already raised \$110,000 to undertake the joint strategy to make their area “investment ready” for overseas companies.

The report will identify timber availability in South West Victoria over a 20 year period, processing opportunities and potential investors. This will be followed by a “high impact marketing plan . . .

The burgeoning bluegum resource, which has rapidly expanded in South East South Australia and Western Victoria, is expected to attract interest from global paper companies.

The race to attract a mill was fuelled by Federal Forestry Minister Wilson Tuckey during a recent visit to the South East, where he claimed a world scale paper mill would be built in either Western Victoria or the South East.

But Wattle Range Council Mayor Don Ferguson, who has thrown his weight behind attracting major processing opportunities to the South East, claimed if the region stood by and did nothing “all the development would go to Victoria”.

Mr Ferguson said his ambition to attract a mill was buoyed by Mr Tuckey who claimed the region’s resource would be large enough to sustain a world class mill.

But he warned it was imperative more bluegum plantations were planted and the water licence debacle sorted out . . .

Meanwhile, Independent Member for Gordon Rory McEwen has challenged Green Triangle major centres to work together and not fight over where a billion dollar paper/pulp mill could be located.

Mr McEwen has also written to Prime Minister John Howard asking that the CSIRO be funded to seriously investigate all value adding potential for the bluegum resource . . .

○ **Appendix Two**

Bluegums and water

From p4 Weekly Times 3/1/01

Row looms over water threat to blue gums.

By Nikki Borchard

A heated debate between irrigators and forestry developers has broken out in South Australia over state government plans to amend water legislation.

Significant forestry development in the south-east of South Australia, particularly blue gum plantations, has caused concern over its impact on the sustainability of water resources.

As a result, water resources minister Mark Brindal last month proposed the introduction of water licences for new forestry plantations to deal with significant land use change.

But forestry developers claim such amendments to the Water Resources Act would freeze plantation development and threaten the future of forestry.

One of Australia's largest plantation companies, Timbercorp Limited, argued that plantation developers should not have to pay for what they did not use.

"The industry cannot proceed with further expansion until it gains a clearer view of the effects of his (Mr Brindal) proposals," Timbercorp chairman David Muir said.

"But if they are implemented as he has stated, the freeze will become permanent."

He said industry saw no reason to pay for a resource it did not use, and the added cost could only detract from its economic viability.

But irrigators claim they face having their groundwater licences reduced as a result of the effect of land use changes and recharge.

Mt Gambier dairy farmer Gary Spain said it came down to the fact that "you can't allow one industry out of the water net to expand at the detriment or expense of others".

"We all acknowledge that we just can't have open slather irrigation," Mr Spain said.

"But for forestry to operate in this area, it needs to operate under the same regime and be accountable for their impact.

"So long as there is a level playing field, market forces will prevail."

However, Mr Muir argued it was "a scientifically dubious proposition that forestry plantations were reducing groundwater resources and hindering their recharge".

Mr Brindal told the South Australian parliament in November that there were two main schools of thought on the issue - a traditionalist view and a contemporary view.

"Traditionalists do not believe that water rights should be separated from land and that any loss of water resource caused by land use change - such as forestry - should be borne by irrigators," Mr Brindal said.

"But the contemporary view would require an amendment ensuring that plantations in sensitive areas of the south-east - to be known as Recharge Water Management Areas - will be accountable for their impact upon the recharge of the unconfined aquifer."

Mr Brindal will meet irrigators and plantation developers in the south-east next week.

Appendix 3

Border Watch p3 3/1/01

Bluegum water use research

Early research by the CSIRO has suggested that bluegums can use underground water.

Embryonic results at a Beachport planting indicate that bluegums could be taking groundwater specifically on that site.

But CSIRO Forestry and Forestry Products research scientist Richard Benyon said the results were not yet conclusive enough to publish.

He said the Beachport trial site did not have the same characteristics as other plantings around the Wattle Range Council area, where most bluegums were going.

“We cannot yet say that (the trees use underground water) for the majority of bluegums in the region,” Mr Benyon said.

“The CSIRO is hoping for extra funding to gain knowledge about the water use of bluegums in the Wattle Range area and we hope to focus this research over the next few years.”

Two bluegum sites were being tested, the Beachport plantation and a small one at Padthaway.

At this stage the Padthaway site had not used underground water but this water table was much lower than at Beachport and further south.

Meanwhile, the Beachport site had soils which were too different to provide a conclusive result for plantings in the Wattle Range and Mount Gambier districts.

A wet winter did not make results any easier to determine and more information would be known after summer.

“I think a lot of sites around Wattle Range perhaps have more clay in the soil. But some early results give an indication that the (Beachport bluegums) may be taking some groundwater,” Mr Benyan said.

“At Beachport the bluegums use at least as much water as they receive from rainfall, a possibly use a bit more than that from the shallow water table, but that is not a generalisation.

“We really need to focus on where the trees are going into the ground rather than 40 hectares at Beachport and five hectares at Padthaway.

“The main reason for doing the work there was to look at how management of the plantations affected water use and to see if we could grow bluegums to produce higher value products.”

Mr Benyon said main research on water use of bluegums had not yet started and would not begin until funding was received. He hoped money would come from the industry and State Government.

He said research would start early next year, and continue for several years to take into account climate and soil differences among other variations.

○ **Appendix 4**

Sharp rise in fox numbers puts Victorian lamb producers under threat. According to VFF regional manager of the Western District, Mr Tyrrell Evans, "Fox numbers are definitely increasing very quickly. There has been a big increase in the number of blue gum plantations and the foxes have been breeding in these relatively sheltered areas". With most of the traditional agricultural activities delivering poor returns, many Victorian farmers have turned their paddocks over to blue gum trees as a long-term investment. Mr Ivan Vowles from Beaufort said "We've lost about 20 lambs this year. The foxes have been very active . . . They are coming out of the blue gum plantations and picking off the lambs" he said. (Age Newspaper p7 16/6/99).

○ **Appendix 5**

Bush towns fearful as timber plantations swallow farms (Age 4/9/99 p17). 445 hectare farm leveled at Wanwin, in western Victoria. "But the rapid growth in plantations has many farmers concerned about the future of their communities. Mr Peter Grist a spokesperson for the Western Plains Plantation Group, a coalition of farmers formed to fight for improved planning arrangements for the plantation industry, said the economic, social and environmental problems associated with tree farms were often overlooked by the authorities . . . He said plantations were removing people from regional

communities. "If those families go, the negative flow-on effects on mail deliveries, local businesses, schools and doctors is enormous." Other impacts include a reduction in land prices due to contracting of the local community, a decrease in surface water run-off and the recharge of underground water systems, an increased fire risk. "We are not opposed to commercial plantations as long as they add to the positive things already happening in the rural community" he said. A spokeswoman for the lobby group A Future for Rural Australia, Ms Linette Treasure, believes plantations are contributing to the "social and cultural genocide of rural communities . . . An East Gippsland farmer, Mr Derek Manning, is taking a plantation company to the Victorian Civil and Administrative Appeals Tribunal to stop an approved development on Mount Delegate. "We are trying to build up tourism around the mountain but no one will want to come and see it when its half-covered by pine trees," he said.

○ Appendix 6

The following information was sourced from the WMC website (WMC own Hi-Fert)

Hi-Fert mainly sells ammonium phosphate fertilisers.

Ammonium phosphate fertilisers are sourced from 3 processes:

- (a) Sulphuric acid sourced from metalurgical sulphur dioxide emissions at MIM mines in Mount Isa and Sun Metals (a Korean owned Zinc refinery) based in Townsville.
- (b) Ammonia from natural gas supplied through the Carpentaria pipeline
- (c) Phosphate rock from WMC's operation at Phosphate Hill in Qld.

Ammonium phosphate is also produced at WMC's Nickel refinery in WA.

Many fertilizers have impurities in them such as Cadmium, Lead and Mercury.

○ Appendix 7

In regards to the bluegum expansion, the following studies may give some implication into the enormity of the water problem that could emerge as these plantations swallow up more and more of western Victoria - especially with a government hell bent on trebling the planation base by the year 2020.

The first quote is from Rob Vertessy from the CRC for Catchment Hydrology (CSIRO).

“The afforestation of agricultural and pastoral areas, if conducted on a sufficiently broad scale, will profoundly influence the hydrology of catchments. Principal amongst the consequences will be reduced water yields and reduced groundwater recharge, though changes in the seasonal distribution of runoff, the timing and magnitude of peak flows, and the persistence of low flows can also be expected. While hydrologic changes may appear within four years of plantation establishment, the full effects may not be felt for ten or more years. In the case of groundwater, the benefits of reduced recharge may take several decades to appear... models show that runoff reductions will be greatest in high-rainfall areas and that pine plantations will have a greater impact than eucalypts. For areas with 800mm mean annual rainfall, mean annual runoff may decline by up to 165mm under eucalypts and up to 210mm under pines. For areas with mean annual rainfall of 1200mm, the mean annual runoff reductions may be 265 and 350mm...”

“There is a growing body of evidence to show that, in addition to reducing groundwater recharge, trees can use significant quantities of groundwater, depending on the depth and quality of this. For these reasons, tree planting is regarded as an effective strategy for salinity abatement. However, there are circumstances where reduced recharge and groundwater abstraction by trees may be undesirable”

“... One of the best local examples of altered flow durations has emerged from the Tumut catchment experiment” planted with pine “It reveals significant changes in the duration of daily flows of all magnitudes. Redhill catchment now ceases to flow for about 40% of the time, assuming that 0.001mm per day is a ‘no flow’ threshold.” ... “The Tumut data ... show that the maximal hydrologic impacts of pine plantations may not be felt until the stand has reached about 10-15yr of age. Hence, any catchment containing a significant proportion of young stands will not exhibit the maximum hydrologic effects of afforestation”

○ **Appendix 8**

Herald Sun p 11 March 22 2000.

Critically endangered red-tailed black cockatoos have had their Victorian breeding haven ruined.

The clearing of a patch of dead and hollowed red gum trees – the species' most important nesting site - in the Wimmera has been dealt a blow to hopes of their survival.

Plantation company Timbercorp allegedly knocked down the ancient trees in a breach of a council instruction.

Of the 18 known nesting sites of the cockatoo, the 80 trees on the 287ha property contained six.

There are believed to be fewer than 1000 birds left.

Director of municipal services for West Wimmera Shire Council, Date Thornton, said the planning permit given to Timbercorp in January stated the trees must be kept.

"They knocked the down against the permit and we are now going through two choices - one of which is to seek an enforcement order through VCAT or negotiate a settlement for restitution," Mr Thornton said.

Timbercorp applied for a permit so they could start a blue gum plantation on the property near Dergholm in the west Wimmera.

Federal Environment Minister Robert Hill (?) is angry about the alleged breach.

"It is simply not good enough that the trees specifically identified for protection under the conditions of the clearing permit have been destroyed," he said.

Environment Australia's (?) Katrina Jenz said the cleared site was the most significant nesting area of the birds.

"This is one of the country's most endangered birds," Ms Jenz said.

A spokesperson for Timbercorp said he could not comment because of negotiations with the shire.

Appendix 9

West Australian page 1 27/12/00.

Spray fears - Plantation giant rejects risk claims
By Ruth Callaghan

THE State Government has threatened to ban all aerial spraying of pesticides on bluegum plantations amid concerns that the chemicals could damage WA's beef, wine and aquaculture industries.

Use of one pesticide has been banned until at least February and Primary Industry Minister Monty House has warned that other chemicals will be blacklisted unless plantation owners change their habits.

But the timber industry has condemned the threat as a cheap vote-buying measure in Mr House's Great Southern electorate of Stirling. Plantation groups fear a ban could damage their own industry, which is worth close to a billion dollars.

And while environmentalists have welcomed a ban, they say it may come too late to prevent potential health problems.

Farmers, particularly in the Great Southern, have expressed fears that chemicals sprayed on plantations drifted on to other properties, collected on roofs and possibly threatened drinking water.

There are also concerns that aerial spraying has killed crustaceans in some dams and waterways.

Mr House said he shared the community's concern that spraying had a potential impact on human health and agricultural industries.

Earlier this year, the Health Department banned aerial spraying of the toxic chemical dimethoate - which can be fatal if ingested in very high concentrations - until at least February. Dimethoate is used against moths. Another four chemicals are commonly sprayed on bluegums.

Mr House said he had asked Attorney-General Peter Foss for information about legally proving that over-spraying of plantations was occurring in agricultural regions.

He also announced that Agriculture WA would meet beef producers to develop a way of monitoring pesticide residue to protect exports. Mr House said plantation managers would need to commit to a final code of practice for the use of agricultural chemicals, which was in draft stage.

But plantation investment giant Timbercorp denied that the bluegum industry was not doing enough to minimise risks from aerial spraying.

Timbercorp spokesman Tim Browning said that a code of practice had been in place since September. The industry had adopted the code fully. He said Mr House was biased against plantations and was putting his re-election ahead of the State's best interests.

Mr Browning said the same chemicals used by the industry were used by canola growers, orchardists and on bowling greens.

If concerns about the safety of meat and wine were genuine, the same risks would have been presented by the massive locust eradication program run by Agriculture WA in recent months.

Conservationist Rob Versluis, a resident in Bow Bridge, between Denmark and Walpole, backed a ban on aerial spraying, but said the Government had taken too long to act. "We don't know that the drinking water is safe, even though they say (the chemicals) break down in time," Mr Versluis said.

"The yabbies are dying in the river, so I just don't believe the spray is harmless. We need to know if it is dangerous before they start to use it, not ban it down the track."

Are Victoria's waterways tested for herbicides? What cost to downstream users if a pollution incident occurs?

Caution over 'all-clear' for Tassie water

By CLAIRE KONKES
03mar05

TASMANIA'S water supply got a clean bill of health when the results of the state's first routine testing of waterways were revealed yesterday.

But critics said it was too early to give the all-clear because more chemicals needed to be tested.

Samples taken from 27 Tasmanian rivers and streams in January were tested for 14 chemicals _ including atrazine, simazine and glyphosate - used in forestry and agriculture.

While the results showed no trace of contamination, scientists conceded testing instrumentation might not always detect very small quantities.

In other words, "no detection" did not necessarily mean there was no chemical in the water.

Analytical Services Tasmania - a laboratory at the University of Tasmania - undertook the testing.

AST manager Mike Johnson said at least one chemical was of concern at rates below detection levels.

"There is a possibility there are low levels of these chemicals below the level of detectability," Mr Johnson said.

The Australian Drinking Water Guidelines say if the chemical 2,4-D - used to control broadleaf weeds in crops - is recorded at a level of just 0.1 part per billion, authorities should take steps to identify the source of contamination.

However, Mr Johnson conceded tests only measured to 0.2ppb.

Primary Industries and Water Minister Steve Kons said sampling would continue every quarter.

However, Mr Kons said testing for the whole gamut of chemicals used by farmers and forestry was difficult because there were so many.

"It's a good solid start, but I acknowledge that more needs to be done," he said.

Alpha Cypermethrin will be the insecticide of choice if bluegum plantations come under insect infestation.

From the Scammell Report:

ALPHA-CYPERMETHRIN
"

•According to its own Material Safety Data sheet (*MSD sheet*), **this chemical is potentially toxic at considerably lower concentrations than we can**

currently measure. [Alpha-cypermethrin is toxic to some organisms at 4 parts per trillion. The lowest concentration we can measure is 50 parts per trillion in water and 50 parts per billion in oyster tissue.]

•Because Alpha-Cypermethrin is highly toxic, and yet rapidly metabolised and degraded in the environment **by the time we know we have got a problem it is too late to measure it.** Even if we capture it in time we probably will not find it anyway.

and

'VERDICT' (Haloxypop Methyl)

"

The residues 'translocate' or travel throughout the plant including the **edible** parts **BUT** the American Food and Drug Administration currently [as of 2002] does not have a test method in place for either the -ethoxyethyl or -methyl form of haloxypop. USDA "**does not have a method of detection of haloxypop and has not tested for it in domestic or imported foods.**" This is the case despite the potential for its presence in foods .."

Sorry folks

Don't have the link to this item (nor the title).

There are no adequate ways of studying pesticides and their possible links to autoimmune disease, for instance. These chemicals get registered anyway. So, cancer is not the be all and end all of pesticide dangers. (Not to mention the endocrine effects such as blocking the action of thyroid hormone on body tissues, and so on).

Brenda

Last Update: Tuesday, March 1, 2005. 8:02am (AEDT)

The Australian Medical Association's public health committee wants water quality treated as a major national public health issue.

The Tasmanian president has briefed the committee on a report examining the effects of aerial spraying near water catchments.

Last month the AMA expressed concern about a possible link between the growing number of cancer cases in Tasmania's north-east and low-level chemical exposure.

After meeting with the national public health committee, the Tasmanian president Dr Michael Aizen is not so worried.

"We haven't been able to demonstrate any significant increase in the risk of cancer in that area," he said.

Despite the findings, the association is not backing down from its call to have aerial spraying banned near water catchments.

Dr Aizen says the AMA is now taking a more active role in a review of drinking water guidelines, an initiative he hopes will be taken up by the association at a federal level.

RE: PLANTATION FORESTRY IMPACTS ON WATER SUPPLIES

GIS Case Study: Gellibrand River Catchment

It is proposed that Friends of the Earth conduct a GIS project into the locations of plantations in domestic water catchments in Victoria beginning with the Gellibrand River Water Supply catchment in the Otway Ranges. Initial research by FoE indicates that up to 7500 hectares of plantations occur within the Gellibrand catchment. Most of these plantations will be aerially sprayed with herbicides such as Simazine. According to the Pesticide Action Network, Simazine is a possible carcinogen, a groundwater contaminant, a developmental and reproductive toxin and suspected endocrine disruptor.

http://www.pesticideinfo.org/Detail_Chemical.jsp?Rec_Id=PC34340

It is FoE's contention that such dangerous pesticides must not be used in drinking water catchments. Many of these plantations were established in the mid 1970's and are due to be logged over the next couple of years. Spraying will follow logging.

A GIS map of the Gellibrand River catchment and surrounding catchments will be generated. This information will then be put onto the internet and CD's. The information will be made available to all people interested in the issue, including water authorities. FoE intends to meet with water authorities such as Barwon Water and South West Water and the local media to further discuss these matters and work on ways to reduce risks. Ideally we would like to see a moratorium of the use of simazine and a moratorium on aerial spraying in the Otways and all domestic water supply catchments throughout Victoria.

The project also hopes to highlight current pesticide and forestry management in plantations in the Otways. This in turn will hopefully lead to better plantation standards in the Otways with a carry over effect occurring elsewhere.

The Gellibrand catchment is the source of drinking water for over 50,000 residents in the State's south west. The following communities get their drinking water from this catchment; Boorcan, Camperdown, Chocolyn, Cobden, Derrinallum, Ghotuk, Glenormiston, Lismore, Noorat, Simpson, South Purrumbete, Terang & Warrnambool.

(The township of Gellibrand also get their water from Lardners Creek within the Gellibrand catchment and is classified by FoE of being at very high risk of chemical pollution. Colac get their drinking water from West Gellibrand Dam and Olangolah Weir which are closed catchments where logging does not occur. Other communities likely to be impacted include; Kawarren, Charleys Creek, Carlisle River, Chapplevale, Devondale, Lower Gellibrand, Kennedys Creek, Beech Forest). More research is required about the sources of these community's water supplies.

Background

For the past 5 years Friends of the Earth Melbourne has been involved with monitoring logging operations in plantations throughout Victoria (see the website Hancock Watch which has had 83,000 visits since the year 2000. <http://www.hancock.forests.org.au>). It has been evident during the course of this research that there are major problems associated with the plantation industry, especially in regard to water quality and quantity issues. Most of these problems stem from inappropriately located plantations planted prior to 1990, however the recent boom in bluegum plantations established after 1996 is also cause for concern.

It is FoE's contention that many problems occur in existing older plantations. The project therefore will assess plantations pre-1990, however findings of the report will also be relevant to the newer generation of bluegum plantations established post 1996.

Given that the Australian conservation movement has almost unanimously supported moves to stop all forms of native forest logging, it is surprising that conservationists have not looked more closely at the impacts of plantation forestry. It would appear that few people have been inclined to look objectively at the industry and as a result understanding of plantations and their impacts have been largely unreported and misunderstood. With the growth of the plantation sector expected to continue to increase, and the associated demise of the native forest industry, it is essential that ENGO's and the broader community begin to assess the plantation sector, as its impacts will increasingly be felt for many generations to come.

The 2020 Vision endorsed by Federal, State and Local Governments in 1996 set out to treble Australia's plantation base by the year 2020. This expansion program has had major consequences for communities that have had plantations foisted on them. Already communities in Tasmania and Western Australia have raised concerns about recent plantation developments associated with the 2020 Vision. Increasingly the issue is raising its profile in Victoria, especially in western Victoria (most recently communities in Cobden, Timboon and Heytesbury have been raising concerns).

Concerns include dislocation of rural communities, impacts of pesticides on water supplies, impacts of spray drift and water consumption of the new plantations. (eg The Cooperative Research Centre for Catchment Hydrology has reported that plantations planted on ex farmland will incur an increase of water consumption of 2 ML (2 million litres) per hectare per year in areas of 900 mm annual rainfall (Pasture will use 7ML per hectare per year, bluegum plantations 9ML per hectare per year. 2ML is the difference between the two landuses). In times of low summer flows and drought, many streams with plantations located in them will dry out, when this may rarely have been the case before the plantations were established. This could have major ramifications for plantations catchments especially those under the influence of greenhouse scenarios which predict less rain in south east Australia). <http://www.greenhouse.vic.gov.au/unclimch.pdf>

In September 2004 the Australian Senate recommended a break on plantation developments (<http://www.hancock.forests.org.au/docs/04sep.htm#trees>) and in early 2004, the Victorian Government announced a need to curb plantation developments due to their potential impact on water supplies.

(<http://www.hancock.forests.org.au/docs/fishy2.htm#White>) Governments are starting to address plantation problems, however Government's will not tackle problems with existing plantations, only future plantations and government's will be reluctant to provide information about plantation locations due to privacy issues and pressure from industry.

It is vital that if plantations are planted they need to be planted in the right locations. Plantations can negate (to some extent) salinisation of catchments, but if the plantations are located in the wrong part of the catchment, they can create more problems than they solve. (eg plantations located in the headwaters of some streams actually reduce flow, thereby reducing the capacity of that stream to be able to naturally flush out toxins and salts. Slower moving water can also increase the risk of algal blooms etc)

<http://www.theage.com.au/articles/2003/01/14/1042520615025.html>

The problem with plantations, is that historically many plantations were not planted with the interests of the broader catchment in mind. Many plantations for instance were established on failed-farmland on very steep slopes or in dubious areas, such as water catchments that supply drinking water to rural communities. Noone (bar FoE) in the environmental sector is aware of the location of plantations throughout Victoria. It is important that information be created and disseminated to the environmental movement and general population about plantation localities, especially in regard to catchment management strategies. In light of this it is FoE's assessment that the water supply catchment most at risk of a chemical incident from plantations is probably the Gellibrand River catchment in the Otway Ranges

In regards to the Otways, which include Victoria's highest rainfall area, (Weeaprounah average rainfall 1900mm per year), current plantations are responsible for using vast quantities of water per year. In regards to the Gellibrand River catchment, 7500 hectares of plantations would equate to using approximately 75000 ML* of water per year, using the plantation water consumption figure of 10ML/ha/yr in areas of 1000mm rainfall. Using a conservative water value of \$500 ML, current plantations in the Gellibrand river are using **\$37million** worth of water per year! (*ML = 1 million litres of water).

If plantations have been established in higher rainfall areas (eg 1200mm rainfall), the figure could be closer to **\$40 million**. OREN (Otways Ranges Environment Network) used a price of \$800 ML* when calculating water costs associated with native forest logging in water catchments in the West Barwon Catchment in the Otways. (In turn these figures were based on South West Region Water Management Strategy November 1989, page 32).

<http://www.oren.org.au/issues/water/report/19economic3.htm> Using \$800 ML in 1200 mm rainfall areas we get a figure closer to **\$65 million** per year. Based on rotations of 30 years, this would total approximately \$2 billion in lost water values in the Gellibrand river catchment. Because plantation trees are always below the age of 30, they will almost entirely be large water consumers.

Most of the plantation companies in the Otways are owned by select groups of shareholders. In comparison to the dubious benefits associated with native forest logging which are largely picked up by the taxpayer, benefits of plantation logging go

largely to a very small group of people. Do these companies pay for the water that their trees consume? This could be regarded as a massive subsidy, as is herbicide use which can be deducted as an expense via the federal tax office).

Historically, pesticide contamination from plantations is nothing new. Many rural residents still have to live with the consequences of having their drinking water sprayed from the 1960's with chemicals including the notorious 245-T (<http://www.hancock.forests.org.au/docs/yarramabnormalities.htm>). As recently as October 2004, rural residents in Craigie NSW have associated cancers in their community with spraying of pine plantations with Atrazine. <http://www.hancock.forests.org.au/docs/adelaide.html#Snowy>.

Of major concern to communities impacted by plantations is the effect of pesticides used by plantation companies. Often new plantations are established in regions that have used minimal amounts of pesticides, meaning that broadscale chemical use is a new issue for these communities to contend with. Friends of the Earth achieved some success in 2003 through our membership of the Forest Stewardship Council (FSC). FSC is the most credible forest certification scheme in the world. Under FSC the use of certain chemicals are prohibited. Simazine is one of those herbicides prohibited under FSC guidelines. Hancock Victorian Plantations applied to the FSC for a derogation for the use of Simazine but was largely knocked back due to arguments expressed by Friends of the Earth. The FSC agreed to allow Hancock to continue to use Simazine until 2006, only if a Pesticide Assessment Group (PAG) was established in Australia. As of November 2004 the PAG has not been established meaning that Hancock cannot use Simazine or they lose their conditional FSC certification.

Hancock were planning to aerial apply Simazine in their hardwood plantations in the Strzelecki Ranges. If Hancock had been successful in their application, it would have left the door wide open for other plantation companies wanting FSC certification to keep using Simazine. It is certainly a concern that this chemical is still being used by an industry that many people believe is clean and green.

Three plantation companies operating in Victoria are currently certified by the Forest Stewardship Council. Hancock Victorian Plantations, ITC and Timbercorp. There are however several other plantation companies operating in Victoria that are not certified by the FSC. As far as we know ITC and Timbercorp are not active in the Gellibrand catchment, as they are new bluegum companies. Hancock have 800 hectares of plantations in the catchment, meaning that only 10% of plantations in the Gellibrand catchment are currently FSC certified.

Most non-FSC certified companies still use Simazine. This is a major concern, as logged pine plantations are being converted to hardwood and simazine is often used in the establishment of hardwood plantations. Other herbicides used by plantation companies operating in the Gellibrand catchment include; Terbacil, Sulfometuron Methyl, Clopyralid, Metsulfuron Methyl and Glyphosate. This list does not include insecticides applied aurally such as Alpha-Cypermethrin which is highly toxic to fish. The Gellibrand River is also the best Blackfish Stream on mainland Australia and none of the herbicides used have been tested on Australian species.

It is very difficult for members of the public to determine the location of existing plantations, let alone newly established plantations. Plantations in Victoria are the responsibility of local government and local government rarely share information with the general public about plantation locations. In regards to this issue, this project will provide local communities with information regarding plantation locations via CD and the internet, with special emphasis given to types of pesticides likely to be used for each location. The project will also include a risk assessment for each plantation and will identify plantation hotspots.

Ideally the project will include areas where recent bluegum expansion has taken place in western Victoria (of most concern being the Crawford River catchment). However, there is a very real need to prioritise plantation mapping in regions where plantations are located in domestic water catchments. For this reason it is appropriate to initially investigate plantation development in the Gellibrand River catchment in the Otway Ranges in south west Victoria. The Gellibrand Water Supply Catchment may have the most densely proportioned plantation mass of any domestic water supply catchment in Victoria. It also has a second problem of at least 5 separate plantation companies and private operators operating within catchment. Newly planted bluegum plantations have started to enter the catchment in recent years.

○ **Major ecological issues facing plantation companies**

Plantation logging and establishment can have more impact on waterways than native forest logging due to several factors. These factors include;

*Use of fertilizers and chemicals in establishment and maintenance of plantations. These artificial inputs are rarely used in native forests. Chemicals are often delivered by helicopter increasing the risk of water contamination. Clearly the main risk associated with pesticide application is at time of planting, however insect infestation in hardwood plantations may require several applications of insecticide in one year.

*Regulations of chemicals used by the plantation industry are almost non-existent. For example plantation companies do not have to tell the State or Local government what quantities and what types of chemicals they intend to use. Residents up to 200 metres away from the plantation area may possibly be informed when spraying occurs, but what of residents downstream of the plantation, relying on the waterway to water stock or to supply drinking water?

*The burgeoning hardwood plantation industry will probably require intensive use of insecticides, an issue which has been ignored by the mainstream community. Some pine plantations are currently being logged and reestablished with hardwoods, possibly meaning an increase in the use of insecticides. Insecticides can be a major problem with human health as they act as cholinesterase inhibitors (effect the central nervous system). This issue caused concerns in Western Australia in 1999/2000, leading to a moratorium on the use of Dimethoate, and it will very likely cause wider concern in Victoria, as more people per capita will be located within close proximity to the sprayed plantations. Only one bluegum company, ITC has publicly stated that it will not use insecticides.

<http://www.hancock.forests.org.au/docs/carbon.htm#Portland>.

*Minimal buffer zones in plantations. Many plantations were established on ex farmland and established through native forest conversion. At the time of establishing these plantations minimal buffer zones on rivers and streams often occurred. When these plantations are logged after 20-30 years, the minimal buffer zones are once again exposed, potentially increasing the likelihood of pollutants entering waterways during a spray event. The Code of Forest Practices allows for the logging and reestablishment of plantations in buffer zones and filter strips. The Code also determines that drainage lines have to be more than 30cm deep, before they warrant filter strip protection. This means that inappropriate buffers in plantations will be a long term problem, unless the Code of Forest Practices is reviewed.

*Many plantations in Victoria were established in areas which were and are domestic water supply catchments. The risk of pollution to water supplies from plantations cannot be discounted. This issue has recently received widespread media coverage in Tasmania (http://sunday.ninemsn.com.au/sunday/cover_stories/article_1649.asp), where several towns have reported polluted water in 2004. Adelaide had their water contaminated in 1997 from a plantation aerially sprayed with atrazine and hexazinone. <http://www.hancock.forests.org.au/docs/adelaide.html#TAG1>

According to the Channel 9 Sunday Program, 100 people in the Tasmanian east coast town of St.Helens now apparently suffer from a mystery illness possibly linked to drinking chemically tainted water draining from plantations (symptoms include rheumatoid arthritis, lupus, brain aneurisms, joint pains, memory loss, brain cysts, muscle spasms and ataxias).

Friends of the Earth has already published information on the internet regarding 134 town water supplies in Victoria, with plantations located in them; <http://www.hancock.forests.org.au/docs/herbicides.htm#towns>
<http://www.australianpaper.forests.org.au/docs/Water.htm>

*Very little information in Australia exists on the locations of plantations within water supply catchments. This is also the case in Victoria. Many plantation companies operate far away from the public spotlight. The public has a right to know where these plantations are located and what practices are occurring within the plantations, including spray regimes.

*Sedimentation of waterways and pesticide pollution of waterways are major reasons for degradation of stream habitats for native fish in Australia. The Gellibrand River is the highest quality Blackfish stream in Australia. Plantation mismanagement can have a major impact on native fish. Barwon Water has already stated that they have been contacted by plantation bluegum companies wanting to spray the insecticide Alpha-Cypermethrin. This is a major concern in the Gellibrand Catchment, as Alpha-Cypermethrin is highly toxic to fish. With pine plantations being converted to hardwoods, the use of insecticides will increase.

*Friends of the Earth has recently been donated a GIS computer system. FoE has already used this system to map plantations and native forests in the Strzelecki Ranges. With this information system FoE has also now attained GIS sets and data

for the entire state, including waterways. By overlaying plantation data over existing sets of information, FoE will be able to generate maps for anywhere in the State.

Basic results of the Strzelecki work can be viewed at;

<http://www.hancock.forests.org.au/docs/strzmap.htm>

*During the Strzelecki project Friends of the Earth has GIS referenced numerous plantations within the 4 proclaimed water supplies in the Strzeleckis. Agnes River, Tarra River, Merrimans Creek and Billy's Creek. With the recently announced 9000 hectare Cores and Links proposal (agreed to by Grand Ridge Plantations largely due to pressure placed on the company by Friends of Gippsland Bush and FoE), people getting drinking water from the Agnes River can be confident that no chemicals associated with hardwood plantations will now be used as logging has been stopped within this catchment boundary. These towns include: (Agnes, Bennison, Hedley, Port Franklin, Port Welshpool, Toora & Welshpool).