THE GREENS
Tasmania

A Submission to:
Agricultural and Veterinary Chemicals (Control of Use) Regulations 2011

We Know There is Something in the Water:

- **What is Labor going to do about it!**
- ***(& will the Liberals …….act to protect human health?.)***

Presented By

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Executive Summary & Recommendations

The Tasmanian Parliamentary Greens welcome the opportunity to comment on the much awaited release for public comment of the draft *Agricultural and Veterinary Chemicals (Control of Use) Regulations 2011*.

The Greens firmly believe that chemical trespass – whether it is into the water, into the soil or into the human body is matter of great concern for everyone. Humanity must face its 21st Century environmental and moral challenges head on simply because we as a species are reliant upon the environment for everything –most critically our health; what is into the air, goes into the water, which in turn goes into the soil, which in turn goes into our food, which is turn goes into our body.

Most alarming humanity has created a new problem for itself - it is called the 'body burden'. The body burden describes industrial chemicals and pesticides loads that are found not only in adult humans, but also in the umbilical cord of new born babies. The virtual self regulating use of pesticides and herbicide is a moral 21st Century problem that requires a 21st Century precautionary and moral response from decision makers.

In the past 10 years exposure to pesticides and herbicides has been scientifically linked to diabetes, Parkinson disease, obesity, breast cancer, auto immune diseases, bowl cancer, reductions in fertility rates in both humans and other types of vertebrates and invertebrates including fish. Yet at the same time the willingness of regulators in Australia to act to protect human and environmental health has decreased. Or rather the political will of decision makers has been so far corrupted that the rights of Sygenta a Swiss pesticide manufacturer, including of triazines, are far greater than those of a child just born in Ringarooma, Tasmania. More is known about the affects of triazines on human health and reproduction cycles than at the time when DDT was banned world wide!

In the context of the Tasmanian situation there are many examples of moral failure in recent decision making; the Duck River Trace Project failed to prosecute any person or entity even though there was repeated water contamination events of the Duck River over four years; one of which broke the World Health Organisation Guidelines for MPCA. Or the contamination of the state's ground water by Atrazine and Hexazinone that was discovered on the first round of testing; or the ongoing studies into the Georges River.

The current regulatory framework in Tasmania has not been designed to protect humans or the environment from contamination by pesticides and herbicides as its primary function. The Government could have at any time in the last four years sought amendments to statutory framework to enable prosecution, and to deliver necessary corrective actions within the system of governance, however the current policy appears to be only 'threatening tighter regulation'. This approach has many parallels with the flawed Forestry Practices planning system in Tasmania which operates on a self regulating basis, and is designed to allow the industry to continuously improve rather than be legislated into best practice.

Most importantly the current regulatory system has completely failed to enact or assign any responsibility for compliance with *State Policy on Water Quality Management 1997* – namely to identify and protect environmental values, and enhance Tasmania's water quality through best practice. If this State Policy were to be implemented rigorously and consistently there would be no pesticide or herbicide contamination events in Tasmania.

In addition, there remains in Tasmania very important, and unanswered questions as to why not one, but several of our oyster farms have experienced very high mortality rates in estuaries that have been subject to a variety of land uses including intensive monoculture tree farms and dairying upstream. To simply ignore the problem can no longer be permitted to be an acceptable response – it must be addressed so all our industries can thrive and not be forced into continual conflict over land use.

The Greens put forward the following principle that must underpin the regulatory framework:

1. Any regulatory system must first and foremost provide for the protection of human and environmental health; it must aim to **eliminate the use of all herbicides or pesticides that are known as carcinogens, bio-accumulative, endocrine disrupting or persistent organic pollutants**: it must also facilitate and actually encourage through a variety of policy levers a substantial reduction in the load of pesticides in the air, the water, soils, animals, as well as the 'body burden' in human beings;

2. The regulatory system must provide maximum flexibility and a high level of responsibility to decision makers who should be required to regular assess and fully consider any changes in science relating to the known affects on human and

environmental health of any given pesticide or herbicide- and to promptly act to eliminate or mitigate damage;

3. The regulatory system must be underpinned by comprehensive and detailed risk assessment, and analysis which regulates the protection of environmental values, and enhances Tasmania's water quality through best practice;

4. The onus of proof should be on pesticide and herbicide manufacturers to prove their product is not harmful to humans or the environment; it should not be up to the public or aquatic life to prove that it is!

The Greens submit the following key recommendations:

1. Aerial spraying is prohibited in water catchments areas that are the source of domestic water intakes and town water supplies; and other key water bodies;
2. Ground based and spraying is prohibited within 10 metres of a water body;
3. All pesticide and or herbicide mixes will contain a dye or other marker to assist with detecting the point of source of any pollution;
4. Minimum and maximum penalties will be increased to reflect the level of risk to property, human and environmental health;
5. Introduce on the spot fines for a first offence at any level of detection;
6. Organic farmers must be notified prior to any spraying operations taking place with an increased maximum penalty if contamination of their property occurs;
7. Maximum penalty increases for body corporate;
8. Prohibit the use of Atrazine and Simazine as a first step, followed by a comprehensive prohibition of the use all other triazines.

Human Health

There is a wide variety of evidence that pesticides damage the human immune system and weaken the body's resistance to infectious diseases and cancer. Pesticides have been linked to cancers of the immune system including leukaemia, melanoma and Hodgkin's disease, cancers of the lip, stomach and prostrate.

Pesticides in the food chain, then can accumulate in human blood, fat and breast milk. Children are particularly susceptible to pesticides as exposure suppresses development of the immune system.

Any regulatory system must eliminate the use of all herbicides or pesticides that are known as carcinogens, bio-accumulative, endocrine disrupting or persistent organic pollutants to protect human and environmental health.

Environmental Health – Studies conducted in 2010 on known affects on Aquatic Life

In 2010 a plethora of studies were released regarding the affects of triazines on aquatic life, the two studies referred to below are significant in the sense that subjects were exposed to permissible or 'so called safe' levels of atrazine –yet exposure at safe levels affected the immune system.

A study[1] of Zebra fish and the effects of a mixture of endocrine disrupting chemicals including atrazine found clear evidence that endocrine disrupting chemicals and their mixtures in aquatic systems will greatly influence the immune system in fish, suggesting that the effects of endocrine disrupting chemicals on fish should be associated with immune toxicity

A study[2] of reproduction of fathead minnow and effects of atrazine even at so called prescribed safe levels found that total egg production was lower by 19-39% in all atrazine exposed groups; that such reductions were most attributable to reduced numbers of spawning events with increased atrazine exposure concentrations, and recommended the reproductive

[1] Jin Y, Chen R, Liu W, Fu Z, Effect of endocrine disrupting chemicals on the transcription of genes related to the innate immune system in the early development stage of zebra fish, Fish and Shellfish Immunology 28 (2010) 854-861

[2] Tillitt, D.E., Et al., Atrazine reduces reproduction in fathead minnow (pimephales promelas). Aquat. Toxicol. (2010), doi: 1016/jaquatox.2010.02.11

effects of atrazine warranted further investigation particularly on feral populations of fish in agricultural areas.

The regulatory system must be underpinned by comprehensive and detailed risk assessment and analysis which regulates the protection of environmental values, and enhances Tasmania's water quality through best practice.

Water Quality – Enhancement and Protection

On behalf of the Tasmanian Greens I must state at the outset we do not support aerial or ground based spraying of agricultural chemical products over important water bodies, or in water catchments areas; and would have preferred the regulations prohibit it.

It is generally (as part of best practice) accepted that riparian zones can only be adequately protected if they are established at **a minimum** of 10 metres. Lagoons, marshes and lakes are also very sensitive environments and the source of water supplies for stock and people – all of which must receive an adequate level of protected from contamination.

Importantly the two metres set back as contained in the draft regulation Section 40 (1), represents the lowest possible level of protection, and is a completely inadequate risk management response that is not in accord with State's obligations under its own *State Policy on Water Quality Management 1997* – namely to identify and protect environmental values, and enhance Tasmania's water quality through best practice.

Aerial spraying should be prohibited in water catchments areas, and other key water bodies including those that are the source of domestic water intakes and town water supplies.

Ground based spraying should be prohibited within 10 metres of a water body.

Man-made drains that contain running water must also be defined and considered as water bodies.

Point of Source Pollution

Prior to application pesticides must contain an organic non-toxic marker, allocated to each person applying sprays, to identify exactly who has, and where pesticides have been applied.

This will prevent skips and overlaps, and assist in the detection of point of source pollution including spray drift.

Minimum & Maximum Penalty

The minimum/maximum penalty applicable in the draft *Agricultural Veterinary Chemicals (Control of Use) Regulations 2011* should be increased -

- **From a fine,** not exceeding 200 penalty units, and in the case of a continuing offence 10 penalty units for every day thereafter, on which the offence occurs;
- **To a fine not** exceeding 800 penalty units, and in the case of a continuing offence, 200 penalty units for every day thereafter on which the offence occurs.

The maximum penalty to only apply to a body corporate that cause residues of restricted agricultural chemicals to be found in water bodies as per section 39 draft regulations

The maximum penalty for an offence should also apply to chemical trespass on an organic farm; for example if spray drifts to an organic farm, it may lose all of its crop –and more seriously its certification – the maximum penalty is $26,000 (one penalty unit is $130); as an incentive to deliver better practices the maximum penalty should be increased to 800 penalty units – or a maximum penalty of $104,000.

Under the draft an offence can only occur if a contamination is detected above a certain level, no less than 14 days apart. Consideration must also be given to a low level 'on the spot' fine for a single detection - Section 39 and 40 should include the provision of an on the spot fine of one penalty unit in the case of a first detection of a agricultural chemical product above the level of detection.

Organic Farmers

Section 41 (5) –this section states that if a person knows of an organic farm under a certified agreement, then they must not spray if the spraying results in a residue

- the words *or ought to know* must included – and the level of penalty increased to a maximum penalty of 800 units or $104,000.

The maximum penalty for an offence should also apply to chemical trespass on an organic farm; for example if a user's spray drifts to an organic farm, that farm may lose all of its crop –and more seriously its certification – the maximum penalty is $26,000 (one penalty unit is $130); as an incentive to deliver better practices, and in recognition of the environmental and financial risk the maximum penalty should be increased to 800 penalty units – or a maximum penalty of $104,000.

Conclusion

There is a genuine moral imperative to ensure that the regulation of herbicides and pesticides in Tasmania does actually provide for the protection of human and environmental health. The framework must **eliminate the use of all herbicides or pesticides that are known as carcinogens, bio-accumulative, endocrine disrupting or persistent organic pollutants**. The 'body burden' potential carried by adults and new born children of industrial chemicals and pesticides, we would also argue carries heavy moral responsibilities. It would be immoral to ignore these serious considerations..

The Greens have attempted through the Parliament to ban identified dangerous pesticides without success due to the lack of support by either the Labor or Liberal Parties.

If Tasmanian regulators are not prepared to enact the precautionary principle and prohibit dangerous chemicals – the Greens have no option at this time but to call for a expanded set backs from water bodies, a phase out of triazines, prohibit aerial spraying to protect water quality, introduce on the spot fines, introduce dye markers to be added to pesticide mixtures, greater protection for organic farmers, and a substantially increase the minimum and maximum penalties for an offence. A very high maximum penalty actually reflects the true level of risk to the environment, to human health, to businesses and to property of certain pesticides and herbicides.