



AUSTRALIAN FOOD SOVEREIGNTY ALLIANCE

Response to the Senate Inquiry into the Independence of Regulatory Decisions made by
the Australian Pesticides and Veterinary Medicines Authority (APVMA)

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Australian Food Sovereignty Alliance

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About the Australian Food Sovereignty Alliance (AFSA)

The Australian Food Sovereignty Alliance (**AFSA**) is a farmer-led organisation made up of organisations and individuals working together towards a food system in which people can create, manage, and choose their food system. AFSA is an independent organisation and is not aligned with any political party. We have around 700 individual, organisational, business, and farm members.

As a farmer-led organisation, AFSA provides a balanced voice to represent farmers. We connect Australian farmers for farmer-to-farmer knowledge sharing, work with government for scale-appropriate and consistent regulations and standards for small-scale farming, and advocate for fair pricing for those selling to the domestic market.

We are part of a robust global network of farmer-led organisations involved in food security and food sovereignty policy development and advocacy. We are members of the International Planning Committee for Food Sovereignty (IPC), La Via Campesina – the global movement of peasant farmers, and Urgenci: the International Network for Community-Supported Agriculture, and we have strong relationships with Slow Food International and its Australian chapters. We also provide support for the Australasian representative on the Civil Society Mechanism (CSM), which relates to the Committee on World Food Security (CFS).

We work extensively with primary food producers and consumers across Australia. Our committee has consisted of published academics and lecturers from the University of Melbourne, RMIT, Deakin University, University of Tasmania, University of Sydney, and QUT. We have also had representation from farmers from every state, and local advocates and campaigners such as Open Food Network, Food Connect, Friends of the Earth, Regrarians, Fair Food Brisbane, and the Permaculture Network.

Our vision is to enable regenerative farming businesses to thrive. Australians increasingly care about the way their food is produced, including its social and environmental impacts. They seek out food that is grown locally and without damage to the environment.

Food produced on small regenerative farms is increasingly in demand, and we believe it is critical that government heeds changing community expectations and facilitates, supports and encourages the growth and viability of regenerative agriculture while protecting the environment and human and animal health.

The Australian Food Sovereignty Alliance respectfully presents this submission to the Rural and Regional Affairs and Transport References Committee (the Committee) for its consideration and thanks the Senate and Committee Secretary for providing this opportunity for public consultation.

Partner Organisations

These long-term partner affiliates of AFSA support this submission:

- MADGE Inc. (Mothers Are Demystifying Genetic Engineering)
- Slow Food Melbourne

Background

On 16 October 2018, [the Senate moved](#) that the [Rural and Regional Affairs and Transport References Committee](#) inquire and report on the independence of the Australian Pesticides and Veterinary Medicines Authority (APVMA or 'the Authority'). The Inquiry is a response to the World Health Organisation's International Agency for Research on Cancer (IARC) classification of glyphosate as probably carcinogenic in March 2015.¹ It follows the decision to relocate the Authority to Armidale.

The recent landmark position on glyphosate handed down by the Californian State Court also prompted the inquiry. Dewayne Johnson's historical court victory against chemical giant Monsanto (now Bayer) determined that handling glyphosate substantially caused his non-Hodgkin lymphoma (NHL). This precedent reflects the last three decades of epidemiological research on the relationship between NHL and occupational exposure to agricultural pesticide active ingredients and chemical groups.²

Analysts predict a floodgate of lawsuits against Bayer-Monsanto will open as a result of this decision.³ Already the US decision has made financial impacts on Australian-listed agribusinesses. The decision brings into question the sustainability of the brands producing any of the 500 glyphosate-based herbicides sold in Australia. Potential responding parties to new lawsuits as a result of glyphosate-related health problems range from employees to manufacturers. Maurice Blackburn will take on matters on behalf of several Roundup users who have cancer. The firm's public liability lawyer Dimi Ioannou has spoken out about the likely negligent actions of companies. Ms Ioannou advocated councils and other authorities review and revisit the use of Roundup.

"Workers could potentially sue their employers if they developed a significant injury as a result of their exposure to Roundup."⁴

The Johnson v Monsanto case has ramifications for our legal system, including the future burden on our courts, and our regulatory landscape for agricultural chemicals and veterinary medicines (together agvet chemicals). To give an idea of the potential reach of the impact, the Inquiry Committee should refer to the [Australian Pesticides Map](#), a set of data created by Friends of the Earth in the absence of a transparent and accessible dataset from the APVMA.

1 ABC, <<https://www.abc.net.au/news/2018-10-08/cancer-council-calls-for-review-amid-roundup-cancer-concerns/10337806>>

2 Leah Schinasi and Maria E. Leon, Non-Hodgkin Lymphoma and Occupational Exposure to Agricultural Pesticide Chemical Groups and Active Ingredients: A Systematic Review and Meta-Analysis, Int. J. Environ. Res. Public Health 2014, 11, 4449-4527; doi:10.3390/ijerph110404449. This article was used as evidence in the Johnson v Monsanto case, and can be accessed via his lawyer's website: <<https://www.baumhedlundlaw.com/pdf/monsanto-documents/johnson-trial/PTX-0861-Schinasi-Leon-Study.pdf>>.

3 ABC, Roundup Monsanto Cancer Ruling prompts farmer fears of ban <<https://www.abc.net.au/news/2018-09-07/roundup-monsanto-cancer-ruling-prompts-farmer-fears-of-ban/10210704>>.

4 ABC <<https://www.abc.net.au/news/2018-08-11/cancer-council-monsanto-should-come-clean/10109760>>.

IARC's review of many scientific studies shows that glyphosate has a positive association with NHL. Two meta-analyses in 2014 confirmed a statistically significant increase in NHL after occupational exposure to glyphosate.⁵

In the Johnson v Monsanto case, Johnson's attorney Brett Wisner convinced the jury that Roundup was a substantial contributing factor to causing cancer. He showed that IARC's classification of glyphosate relied on epidemiological, toxicological and mechanism studies of Roundup, while Monsanto's evidence was limited in expertise and part of a public relations campaign to continue commercialising their product. The APVMA's response to the case of Johnson v Monsanto heightened concerns for the health and safety of Australian people, animals and the environment.

Carey Gillam, author of *Whitewash: The Story of a Weed Killer, Cancer, and the Corruption of Science*, reported on the connection between glyphosate and NHL in her 2017 book. Gillam supported the IARC's study, saying that it offers an "authoritative analysis of research examining correlations between the pesticide and disease."⁶

NHL is one of the 10 most common cancers in Victoria.⁷ About 1,000 Victorians are diagnosed with NHL every year.⁸ Scientists have been studying the rise of NHL in connection with farmworkers' exposure to pesticides since the 1980s. Many have proven a substantial connection in epidemiology and toxicology. Despite the increased likelihood of NHL and other cancer diagnoses, and three decades of scientific research relating to an increased rate of NHL among farmers, Australia's agvet chemical regulator decided there are "no grounds" to formally reconsider glyphosate.⁹

Australia's dependence on chemical fertilisers and pesticides is a 'chronic stressor' to farm viability and is likely to lead to more frequent disruptions to the global food system.¹⁰ The farming sector is experiencing ongoing and increasing pressure driven particularly by the rising cost of inputs such as fertilisers, pesticides and fuels.¹¹ These pressures put stress on farms and affect their long-term profitability. Many broad-scale farmers rely on pesticides and other products marketed as 'necessary to feed the world'. We now know from an [analysis of world agriculture](#) that small-scale agriculture produces 70% of the world's food and by using agroecological farming practices without pesticides.¹² This analysis, *Agriculture at a Crossroads*, a Global Report by the International Assessment of Agricultural Science and

5 Schinasi L, Leon M, 2014, Non-Hodgkin Lymphoma and Occupational Exposure to Agricultural Pesticide Chemical Groups and Active Ingredients: A Systematic Review and Meta-Analysis. *Int J Environ Res Public Health* 2014;11:4449–527. doi:10.3390/ijerph110404449

6 Carey Gillam, 2017, *White Wash: The Story of a Weed Killer, Cancer, and the Corruption of Science*, Island Press, United States of America, pp.10.

7 Cancer Council Victoria, 31 July, 2007, reviewed by Assoc. Prof. Jeff Szer, Head, Bone Marrow Transplant Service, Dept of Clinical Haematology & Medical Oncology, Royal Melbourne Hospital
https://www.cancervic.org.au/cancer-information/cancer-types/cancer_types/lymphoma?gclid=Cj0KCQiAIXfBRCPARIsAKvManwrg6yrp8SqTtg62zdDj-a1YNpGH4dLZyNm8JQCvYEZyZabQ0HhuAaAkRWEALw_wcB

8 Ibid.

9 APVMA Regulatory Position: consideration of the evidence for a formal consideration of glyphosate, <<https://apvma.gov.au/sites/default/files/publication/20701-glyphosate-regulatory-position-report-final.pdf>>.

10 Carey, R., Larsen, K., Sheridan, J. and Candy, S. (2016) Melbourne's food future: Planning a resilient city foodbowl. Victorian Eco-Innovation Lab, The University of Melbourne, p. 14

11 Ibid.

12 Pesticide Action Network, Agroecology: Resilient and Productive, <<http://www.panna.org/agroecology-farming-solutions/agroecology-resilient-productive>>

http://www.fao.org/fileadmin/templates/est/Investment/Agriculture_at_a_Crossroads_Global_Report_IAASTD.pdf

and

https://www.researchgate.net/post/Smallholder_farmers_produce_70_per_cent_of_the_worlds_food_Whats_the_source_for_this_number

Technology for Development, is considered the most comprehensive analysis of world agriculture to date. AFSA advocates for small-scale farmers and rejects the application of 'chronic stressors' (agrochemicals strongly associated with industrial systems) to agriculture.

Despite the glaring need for a transition to ecological agriculture, agvet chemical use is increasing. Governments and regulators continue to facilitate pesticide industry claims to dictate the future of our food system. The number of small farms in Australia is decreasing, with only 10% of farms producing over half of our agricultural output, and more large farms consolidating to respond to pressures on the agribusiness industry.¹³ Industrial agriculture puts our food sovereignty at risk and disproportionately affects important stakeholders who have not been consulted in this Inquiry. Among those stakeholders are small-scale farmers, farmworkers, Indigenous Peoples and rural and peri-urban communities.

"Small farmers, farmworkers, Indigenous Peoples and rural communities disproportionately bear the burdens of our chemical-dependent industrial agricultural system. This can include chronic illnesses, contaminated air, water and soil, inadequate on-the-job protections and unfair laws rooted in racism and oppression."

- Pesticide Action Network

During the Senate sitting on 16 October 2018, Senator Janet Rice stated:

"In light of the California court ruling and the World Health Organisation's finding that glyphosate is probably carcinogenic, the fact that this inquiry will only touch on the ability of the APVMA to assess chemicals like glyphosate does not abrogate the need for an independent, transparent, science-based inquiry into the safety of glyphosate."

For this reason, the Inquiry ought to consider the consumer and public health concerns related to glyphosate, even though the focus of the Inquiry is on the independence of the APVMA. These concerns are valid and have amplified since the ABC Four Corners program, *The Monsanto Papers*, aired in October. The public are now aware of the history of corrupt science and political donations in Australia. The investigation exposed relevant regulatory issues, including CropLife Australia's public relations campaign to influence regulators and politicians to make the Chemical Re-approval and Re-registration Scheme redundant in 2014. In AFSA's view, when APVMA chose to take no regulatory action after considering evidence that convinced a sceptical jury and judge to order damages to Mr Johnson, the regulator's integrity became questionable. AFSA supports journalism that strengthens democracy and promotes transparency.

Annually, over \$3 billion worth of agvet chemicals are sold in Australia.¹⁴ Glyphosate has been registered for use in Australia for over four decades. The APMVA as a regulatory body assesses and registers agvet products up to the point of retail sale, but has failed to operate independently and effectively. As a regulatory body, the APVMA is directed by the Government and thus the only avenue for performance improvement is through self-led or government-led reform. The regulator should respond effectively to audits and recommendations. But since

13 Carey, R., Larsen, K., Sheridan, J. and Candy, S. (2016) Melbourne's food future: Planning a resilient city foodbowl. Victorian Eco-Innovation Lab, The University of Melbourne, p. 14
14<https://portal.apvma.gov.au/pubcris?p_auth=ObRVUmz0&p_p_id=pubcrisportlet_WAR_pubcrisportlet&p_p_lifecycle=1&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_pos=2&p_p_col_count=4&pubcrisportlet_WAR_pubcrisportlet_javax.portlet.action=search>.

July 2014, legislative reforms to improve APVMA's regulatory activities have not been fully legislated. The Australian National Audit Office (ANAO)¹⁵ completed an [Audit](#) on the reform in 2017. ANAO confirmed that the full scope of the reforms have not been implemented.¹⁶

The ANAO Audit also revealed that APVMA has not completed a review of its risk-based regulatory framework, failing to support legislative objectives. The APVMA's ongoing assessment of agvet product and chemical applications post-approval were not fit-for-purpose. The Authority was also criticised for its ineffective governance, significant weaknesses and oversight in planning and risk management arrangements. The APVMA's effectiveness was limited by its operational changes and simultaneous engagement with the industry. ANAO made clear that the Authority "*has further work to do as it is yet to implement a risk-based assessment decision framework to target its regulatory activities.*"¹⁷

It appears that APVMA cannot be considered an independent, reliable controller of agrochemical exposure.

The Senate has commissioned the Rural and Regional Affairs and Transport Reference Committee (the Inquiry Committee) to inquire and report on the independence of regulatory decisions made by the APVMA with particular reference to:

- a) *the responsiveness and effectiveness of the APVMA's process for reviewing and reassessing the safety of agricultural chemicals in Australia, including glyphosate, and how this compares with equivalent international regulators;*
- b) *the funding arrangements of the APVMA, comparisons with equivalent agricultural chemical regulators internationally and any impact these arrangements have on independent evidence-based decision making;*
- c) *the roles and responsibilities of relevant departments and agencies of Commonwealth, state and territory governments in relation to the regulation of pesticides and veterinary chemicals;*
- d) *the need to ensure Australia's farmers have timely access to safe, environmentally sustainable and productivity enhancing products;*
- e) *the impact of the APVMA's relocation on its capability to undertake chemical reviews in a timely manner; and*
- f) *any other related matters.*

For convenience, readability and efficiency, this submission is structured to fit these particulars.

Executive Summary

AFSA's submission reviews the responsiveness and effectiveness of the APVMA's process for reviewing and reassessing the safety of agvet chemicals, including glyphosate. Our recommendations support a transparent and effective agvet chemical regulatory system independent from industry funding. AFSA promotes regional, rural, and remote health among farmers and agricultural workers, and our goal is to secure food sovereignty for all eaters,

¹⁵ The ANAO assists the Auditor-General to carry out duties under the Auditor-General Act 1997 and provides independent reports and advice for the Parliament, the Australian Government and the community. Their aim is to improve Commonwealth public sector administration and accountability.

¹⁶ Ibid.

¹⁷ Ibid.

which encompasses a right for everyone to access safe, non-toxic food. We stand for democratic governance and best-practice regulatory systems that put people before profits and safeguard our environment.

This Inquiry provides an opportunity to make a detailed assessment of the procedural aspects of the APVMA and whether they are fit for purpose and sufficiently demonstrate regulatory independence from private interests. In order to support the development of quality regulation, the Australian government should assess the level of independence the APVMA has in practice and identify areas where undue influence hinders performance. As an OECD country, Australia should ensure its regulators are checked for potential entry points for undue influence, such as in its financing arrangements, staff behaviour, and from the political cycle.¹⁸

The APVMA insists that it acts independent of industry.¹⁹ For this statement to have integrity, it must be shown that the Authority frames its purpose and rationale to protect itself from undue influence. The Authority's regulatory performance to date has called into question whether it can maintain confidence in the market and trust in public institutions. There is a clear need to facilitate behavioural and organisational change in the APVMA, so it always acts objectively, impartially and consistently, without conflict of interest or bias. Ultimately, governments are responsible for developing the policies for the regulated sector and should therefore take this opportunity to make a model example out of the APVMA for all of Australia's regulators. There is much at stake in this Inquiry, as the final report will affect public health, animal welfare, the environment, and therefore our food sovereignty.

Based foundationally on our key relevant policies, AFSA's core analysis is a procedural review of the APVMA's independence and regulatory performance. We will provide alternatives to the current regulatory environment and provide evidence in support of our submission.

¹⁸ OECD, 2016, Being an Independent Regulator, < https://read.oecd-ilibrary.org/governance/being-an-independent-regulator_9789264255401-en#page3>.

¹⁹ Four Corners, the Monsanto Papers. <<https://www.abc.net.au/4corners/the-monsanto-papers/10352384>>.

Key Relevant Policies



Food Sovereignty

Food sovereignty asserts the right of peoples to nourishing and culturally-appropriate food produced and distributed in ecologically sound and ethical ways and their right to collectively determine their own food and agriculture systems.



Genetic Modification Technology

The application of genetic modification technology has been appropriated in the interest of corporate profit and creates further dependencies for farmers, and has delivered a burden of unmanageable pests and weeds. AFSA asserts the need to protect non-GM farms from GM contamination.

In the absence of prohibition of GM, AFSA supports the requirement of a permit to grow GM crops, administered with a suitable notice and review period, and subsequent creation of a publicly available directory of farms growing GM crops.



Regulation

AFSA supports fair, consistent, transparent and scale-appropriate regulation of food and agriculture, built in democratic consultation with the community, to ensure it is produced and distributed safely.

AFSA does not support regulation that is used to prohibit access to food produced and distributed in ecologically-sound and ethical ways.

We support scale-appropriate regulation that ensures safety, quality and fitness for purpose, and that is protected from malpractice in the industry.

Recommendations

Recommendation 1: Where synthetic chemicals are found to cause hazards or risks to human, animal or environmental health, regulatory steps should be taken to remove such chemicals from the market immediately.

A failure to take such measures, for example in the case of glyphosate, would require intervention by government as necessary to ensure that best regulatory measures are in practice. The Commonwealth should guarantee all approved and registered products are regularly re-assessed. This ought to include imported products for sale and use.

Recommendation 2: Reinstate the Chemical Re-approval and Re-registration Scheme in order to implement a rigorous and precautionary process for reviewing latest scientific data on the safety of all agvet chemicals, every 15 years (as is required in the US and EU).

This scheme was introduced by the Gillard government, but was repealed by the *Agricultural and Veterinary Chemicals Legislation Amendment (Removing Re-approval and Re-registration) Bill 2014*. We oppose APVMA's government-funded business project to fast-track or streamline APVMA's assessment process for selected applications.²⁰

Recommendation 3: Set up a chemical regulation strategy that promotes the precautionary principle to ensure chemical regulation genuinely prioritises public health, animal welfare, food safety and environmental protection ahead of markets and trade.

Recommendation 4: Conduct an independent assessment of the appropriateness of the cost recovery model for the APVMA and the alternative funding models available such as federal budget appropriation.

Recommendation 5: All approved and registered agvet chemicals should be subject to independent review, and those reviews should be prioritised where new evidence is found about the dangers of such products, especially where it leads to bans or restrictions in overseas jurisdictions.

Recommendation 6: Fund independent research bodies to assess the health and environmental impacts of pending and approved agvet chemicals. Chemicals subject to review should be prioritised objectively and independent of the APVMA's prioritised chemicals list.

Recommendation 7: Ensure the industry's specific research responsibilities are observed by updating *the Australian Code for the Responsible Conduct of Research* to better reflect good research practices with appropriate violations provisions.

²⁰ Self-pack applications may be eligible for fast-tracking, as supported and funded by the Australian Government's Agricultural Competitiveness White Paper .

Recommendation 8: Endorse an environment and culture of independence within the APVMA.

Recommendation 9: The Commonwealth Government should work with local and state governments to collect evidence about the significant human and environmental risks and hazards that glyphosate causes, including human hair tests and epidemiological studies.

Recommendation 10: Enhance the role of the Department of Health to protect public health and safety. This could involve assisting state and local governments to control use of agvet chemicals.

Recommendation 11: Support the development of businesses that create, sell and use sustainable alternatives to agvet chemicals, including agroecology and regenerative agriculture, organic alternatives to weed and pest management, and traditional agricultural pesticides, herbicides, insecticides, fungicides and veterinary medicines.

Recommendation 12: Implement codes in Australia based on the [FAO/WHO's Codex Alimentarius' good animal feeding practice guidance](#) for governments. The government should ensure food safety in relation to contaminants and residues of agvet chemicals.

Recommendation 13: Enable broader public and civil society participation in the chemical regulatory process and open-access knowledge about agvet chemicals.

Regulatory Environment

Regulation ought to ensure fairness, openness and equality. The role of regulation in the Australian agricultural context is to ensure people, our flora, fauna and environment are protected from unsafe, harmful products. The APVMA has been subject to criticism for their lack of transparency and an ad hoc, one-size-fits all approach to regulation.²¹ APVMA has created a regulatory environment that has been criticised by both large-scale applicators of the chemicals it regulates and the non-users in the organic, small-scale sectors.²² While the federal government has endeavoured to improve this environment by establishing commissioners and investigating regulatory behaviour, both the process and outcomes of our current regulatory environment have failed to serve their purpose.

APVMA is responsible for administering regulatory controls of agvet chemicals for their impact on human health, the environment, trade, and for monitoring their efficacy.²³ The 2016 [Productivity Commission Inquiry Report on the Regulation of Agriculture](#) reviewed APVMA's regulatory responsibilities and found that progress towards reviewing chemicals has been disappointing. The submissions to that Commission identified major concerns regarding the

21 Jeggo Martyn. (2014) 9 (Suppl 1):S19–S23, Science delivering to regulators, citing Anon (2013) Regulators show no compassion for our farmers. Editorial comment. Countryman, Perth 31st October

22 National Farmers Foundation (2012) Farmers hamstrung by regulation, at home and abroad. <http://www.nff.org.au/read/3127/farmers-hamstrung-regulation-at-home-abroad.html>.

23 2016 Productivity Commission Inquiry Report on the Regulation of Agriculture, <<https://www.pc.gov.au/inquiries/completed/agriculture/report/agriculture.pdf>>.

increased use of glyphosate as a result of the introduction of genetically-modified (GM) cotton and canola. The Commission Report confirms that APVMA's operations are ineffective and inefficient, and that their processes are inflexible and lack clarity. The Commission concluded that the regime for regulating access to agvet chemicals should be monitored to ensure that it continues to be proportionate to the risks associated with agvet chemicals and reflects advances in scientific knowledge. This should include regular reviews of the APVMA and compulsory re-assessments of chemicals.

The reforms proposed had the potential to improve outcomes for farmers and the broader community, but the success of those efforts continues to hinge on implementation. Governments have identified issues and provided steps to improve the regulatory system for agvet chemicals. The slow implementation of reforms calls into question the manner in which APVMA conducts its regulatory role.

By law, the functions of the Authority must remain independent. The *Agricultural and Veterinary Chemicals (Administration) Act 1992* established the National Registration Authority for Agricultural and Veterinary Chemicals (NRA) which subsequently became the APVMA. That Act sets out the legislative intention for independence at the core of the APVMA's role. It defines the APVMA's role as an independent statutory authority undertaking the Commonwealth's responsibilities.

The need to review regulatory functions of the APVMA is required by two pieces of legislation. The *Agricultural and Veterinary Chemicals Legislation Amendment Act 2013* requires a review of the agvet regulatory reforms by July 2019. The *Agricultural and Veterinary Chemicals (Administration) Act 1992* requires a comprehensive review of agvet legislation by July 2024.²⁴ In addition to legal necessity for reform, inquiries such as these provide opportunity for the government to improve standards of best regulatory practice in response known public health risks caused by glyphosate and other agvet chemicals.

There are many more reasons why reform is necessary, but in essence, our regulatory system is clearly not doing its job. APVMA is not the only regulator subject to criticism. As UN Special Rapporteurs Hilal Elver and Baskut Tuncak pointed out to the UN Human Rights Council, "*the pesticide industry's efforts to influence policymakers and regulators have obstructed reforms and paralysed global pesticide restrictions*".²⁵ According to a report by PAN Asia Pacific (PANAP) published this year, efforts to enforce accountability for pesticide problems in the Asia Pacific have not been successful.²⁶ While regulatory systems in other countries fail to effectively regulate, as a major agricultural producer, Australia should welcome the opportunity to ensure our agvet chemical regulator leads by example.

Australians have been left confused about whether to trust the specialised cancer agency IARC or to rely on the APVMA. Based on the APVMA's refusal to review and the direct contribution

24 Also note that the Agricultural and Veterinary Chemicals Legislation Amendment (Streamlining Regulation) Bill 2018 repeals the Agricultural and Veterinary Chemicals Legislation Amendment (Removing Re-approval and Re-registration) Act 2014. <http://www.agriculture.gov.au/ag-farm-food/ag-vet-chemicals/better-regulation-of-ag-vet-chemicals/streamlining/public-consultation>

25 Human Rights Council, Report of the Special Rapporteur on the right to food (Effects of pesticides on the right to food), 24 January 2017, A/HRC/34/48, available at <https://www.ohchr.org/EN/Issues/Food/Pages/Annual.aspx>

26 PAN Asia Pacific, 2018, Of Rights and Poisons: Accountability of the agrochemical industry, accessed at < <http://files.panap.net/resources/Of-Rights-and-Poisons-Accountability-of-the-Agrochemical-Industry.pdf>>.

of industry money to their functions, the logical response for the government would be to assess alternatives that put public health, animal welfare, and agroecological²⁷ objectives first.

This Inquiry ought to be a comprehensive review process. It should provide the Australian community with clear guarantees that the chemicals registered for use are safe and do not pose undue risks. To achieve this, the APVMA needs to take a systematic approach to identifying and reviewing all chemicals that enables greater scrutiny of existing registrations and approvals. The onus of proof for reregistration should also rest on the registrants.

Our Assessment of APVMA's Independence

Particular matter #1: The responsiveness and effectiveness of the APVMA's process for reviewing and reassessing the safety of agricultural chemicals in Australia, including glyphosate, and how this compares with equivalent international regulators

Compared to Europe and the US, Australia's regulator has no requirement for agvet chemicals to be regularly reviewed.²⁸ Australia's approach has been described as a "relatively ad hoc risk-based system". Our existing review arrangements are not satisfactory and should be brought into line with overseas regulators.²⁹ Concerns about the safety of agvet chemicals are usually brought to APVMA's attention by the community, registrants themselves, or the regulator's own initiative. The onus is therefore on the Authority to build a case to initiate reviews, and then to analyse information from its own investigation. Registrants are not responsible for ensuring the safety of their products.

There have been a number of opportunities for the APVMA to review its Chemical Review Process. The government committed at least \$8 million to reform APVMA's process for review.

The *Agricultural and Veterinary Chemicals Legislation Amendment (Streamlining Regulation) Bill 2018* amended the review process. Its primary goal is to streamline and fast track APVMA's assessment process. This might satisfy Australia's [Deregulation Agenda](#) to remove regulatory burden on industry³⁰, but AFSA opposes streamlining of chemical assessment and review processes because the core of such assessments should concern public health and the safety and sovereignty of our food system rather than timeliness.

On the surface, APVMA's [Reconsideration](#) process appears to enable reconsideration of approved active constituents, registrations of chemical products and approved or registered labels. Contrary to its intention, this process has failed to recognise credible new information about the ongoing safety, environmental impact or effects on trade of glyphosate. Despite there

²⁷ Agroecology is a scientific discipline, a set of practices and a social movement. As a science, it studies how different components of the agroecosystem interact. As a set of practices, it seeks sustainable farming systems that optimize and stabilize yields. As a social movement, it pursues multifunctional roles for agriculture, promotes social justice, nurtures identity and culture, and strengthens the economic viability of rural areas. Family farmers are the people who hold the tools for practising Agroecology. They are the real keepers of the knowledge and wisdom needed for this agenda. Therefore, family farmers around the world are the keys elements for producing food in an agroecological way. ([FAO](#))

²⁸ Better regulation of agricultural and veterinary chemicals - Regulation impact statement, November 2011, accessed at <<https://ris.pmc.gov.au/2011/11/29/better-regulation-agricultural-and-veterinary-chemicals-%E2%80%93-regulation-impact-statement-%E2%80%93>>.

²⁹ Better regulation of agricultural and veterinary chemicals - Regulation impact statement, November 2011, accessed at <<https://ris.pmc.gov.au/2011/11/29/better-regulation-agricultural-and-veterinary-chemicals-%E2%80%93-regulation-impact-statement-%E2%80%93>>.

³⁰ Australian Government Department of Jobs and Small Business, <<https://www.jobs.gov.au/deregulation-agenda>>.

being hundreds of chemicals on the market³¹, the APVMA has only prioritised five chemicals for reconsideration in the next 5 years.³² And of the 11,700 toxic pesticides registered, only 13 are being reviewed. In terms of timeliness, APVMA have failed to complete a review of glyphosate (registered in 1974). APVMA has actively denied the hazards of glyphosate and glyphosate is not listed on APVMA's [priority candidate review list](#). A review of Chlorpyrifos began in 2009, Diazinon in 2003, and Paraquat 1997, but all are incomplete.³³ By contrast, APVMA has completed assessment of 757 new chemical applications since September 2018.³⁴

Industry stakeholders such as the NSW Farmers' Association submitted to this Inquiry that: *"A formal reconsideration process should only be initiated when new scientific information raises concerns relating to the safety or effectiveness of the pesticide or veterinary medicine, rather than being based on the sentiment of the public or decision-makers."*

In our view, public concerns should not be ignored as they are valid and not baseless. Any good regulator would be expected to make an appropriate response. Public concerns are an important part of the civil, political, economic, social and cultural life of societies. In the past, protests against the glyphosate in America prompted a debate and altered the agenda of the US Food and Drug Administration (US FDA), despite USDA and US EPA inaction. Public outcry was supported by the US government accountability office.³⁵

Recommendation 13: Enable broader public and civil society participation in the chemical regulatory process and open-access knowledge about agvet chemicals.

APVMA and international regulators

The Authority has made little attempt to make full use of independent international evidence. APVMA has participated in forums and international meetings to discuss policy issues³⁶ and to assess the currency of Australia's assessment and registration of agvet chemicals. As part of the "harmonisation" of its regulatory system, the APVMA uses international risk assessments to make decisions. But the Authority uses data packages produced and "harmonised" by a collaboration of chemical manufacturers.³⁷ The 2016 [Productivity Commission Inquiry Report on the Regulation of Agriculture](#) found that APVMA does not make use of international evidence in its decisions and that there is scope to do more and improve processes.

The CEO of APVMA has stated that the APVMA will accept international approvals but only on a case by case basis, requiring registrants to provide data to rely on, rather than the regulator sourcing trusted research from overseas. The APVMA is not willing to re-assess because it would "entrench the duplications of assessments" and increase costs.³⁸

31 See APVMA chemicals database, <https://portal.apvma.gov.au/pubcris?p_auth=AZRq0gu6&p_p_id=pubcrisportlet_WAR_pubcrisportlet&p_p_lifecycle=1&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_pos=2&p_p_col_count=4&pubcrisportlet_WAR_pubcrisportlet_javax.portlet.action=search>.

32 APVMA, <<https://apvma.gov.au/node/10876>>.

33 Gene Ethics.

34 <https://mailchi.mp/apvma/apvma-media-release-australian-farmer-s-get-world-first-access-to-latest-agvet-chemicals-1040681?e=f99f68f1ed>

35 <https://www.gao.gov/products/GAO-15-38>

36 <https://apvma.gov.au/node/33296>

37 APVMA's Approach to Use of International Data, Assessments, Standards and Decisions, <<https://apvma.gov.au/sites/default/files/images/node-14181-use-of-international-data-consultation.pdf>>.

38 CEO expectations on use of international data, standards and assessments 20 June 2018.

Preventing duplication of registration and assessment requirements and reducing costs should not be justifications for a regulator to refuse to re-assess harmful products. Regulators should always ensure that all chemical products on the market are safe, regardless of duplication or cost. To resolve this issue, Australia should rely on independent science and not science generated from industry. Our regulator should also refer to trusted international research, but not research that is compromised or commissioned by chemical manufactures.

International risk assessments are not always appropriate as evidence in Australia. In 2012, APVMA concluded a 12-year review of the PSII herbicide diuron. The review was concerned with the potential impact on the Great Barrier Reef. Diuron is a very effective herbicide that acts by inhibiting photosynthesis. The most likely direct environmental impact was a reduced capacity for photosynthesis. The risk assessment process that the APVMA applied used a runoff risk model developed and validated under European farming conditions. However, the farming conditions in the sugarcane regions of the Great Barrier Reef catchments have environmental parameters beyond the currently validated bounds of the model. The use of the model to assess environmental risk in these regions was found highly inappropriate, demonstrating the pitfalls of a one size fits all approach.³⁹

This is why it is important for the APVMA go beyond making “greater use of data and assessment from reputable and comparable regulatory agencies”, as recommended by the 2016 Commission.⁴⁰ The Authority and government departments involved should consider independent regulatory agencies as the most reputable, and should use appropriate scientific methods.

We support an approach to assessment and re-assessment that prioritises human, animal and environmental health. We discourage a once-size-fits all approach. Australia should consider trusted independent international studies thoroughly but also conduct precautionary, domestic reviews of Australian independent science on agvet chemicals, especially where there is considerable doubt about the safety of products.

APVMA participates in various activities of the Organization for Economic Co-operation and Development (OECD) including its [Working Group on Pesticides](#), which directs and oversees the work of the OECD [Agricultural Pesticide Programme](#).⁴¹ This Programme has projects in re-registration, but it is unclear to what extent APVMA engages this project. APVMA should increase confidence in regulation and create more certainty in the market by having a compulsory chemical re-assessment process.

Chemical re-assessment by other regulators

1. Health Canada

In 2010, Canadian public health department Health Canada’s regulator, the Pest Management Regulatory Agency (PMRA), began re-evaluating of glyphosate in collaboration with the US EPA’s re-evaluation of glyphosate. In April 2015, the PMRA published its *Proposed Re-evaluation Decision* for glyphosate. Health Canada found some evidence for an increase in the incidence of ovarian tumours in mice at the highest tested dose. The PMRA proposed a

39 Glen Holmes, Australia’s pesticide environmental risk assessment failure: The case of diuron and sugarcane, *Marine Pollution Bulletin* 88 (2014) 7–13, <http://dx.doi.org/10.1016/j.marpolbul.2014.08.007>
40 Recommendation 7.1, 2016 Productivity Commission Inquiry Report on the Regulation of Agriculture, <https://www.pc.gov.au/inquiries/completed/agriculture/report/agriculture.pdf>
41 APVMA, <<https://apvma.gov.au/node/1010#pesticides>>.

condition on the use of glyphosate: that new risk reduction measures be proposed for end-use products, aimed at protecting both human health and the environment.

After a re-evaluation decision on glyphosate, Health Canada now requires manufacturers to update labels for products containing glyphosate by April 2019.⁴²

2. New Zealand Environmental Protection Agency (EPA)

The New Zealand EPA administers a chemical reassessment programme that reviews hazardous substances already approved in New Zealand. The programme can be triggered to change rules on chemical management, or to reassess approved products. A product can be revoked or banned. Under New Zealand law, a chemical's approval does not expire.

Reassessments may be initiated by the EPA or by any other party. The EPA also worked with international counterparts to identify a 'living' priority chemicals list of around 40 chemicals to review. To date another 700 chemicals have been screened.⁴³

APVMA

By contrast, and after reviewing assessments by Health Canada, Joint Food and Agriculture Organisation of the UN/WHO Meeting on Pesticide Residues, the European Food Safety Authority (EFSA), the European Chemicals Agency (ECHA), and the New Zealand Environmental Protection Authority (NZ EPA), no action has been taken to update labelling requirements.

The APVMA should have a formal legal process like the New Zealand EPA.

The 2011 *Better regulation of agricultural and veterinary chemicals Regulation impact statement* stated a re-registration system for the APVMA would have:

- *Been risk-based;*
- *Drawn together information and data provided by chemical companies and other sources;*
- *Introduced additional costs to approval holders and registrants, who under the existing system are not subject to re-registration requirements;*
- *Increased cost to the agvet chemical industry would be outweighed by the benefits to the broader community through improvements to the chemical review program⁴⁴ and greater confidence in the integrity of the NRS;*
- *Enforced a systematic risk-based process for chemical review, combined with efficiency and transparency measures, making it better able to adjust to the changing demands of business and the wider community over time;*
- *Improved the efficiency of the agvet chemical industry's engagement with the APVMA; and*
- *Added to the functions that the APVMA is expected to perform.*

The Inquiry Committee should reinstate the reforms to the Agvet Code and the Agvet Code Regulations.

⁴² Health Canada, <<https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/decisions-updates/registration-decision/2017/glyphosate-rvd-2017-01.html>>.

⁴³ New Zealand EPA, <<https://www.epa.govt.nz/industry-areas/hazardous-substances/chemical-reassessment-programme/>>.

⁴⁴ The Chemical Review Program reconsiders the registration of agvet chemicals if potential risks to safety and performance have been identified. Reviews may focus on one or more areas of concern including environmental safety, worker safety, public health, residues or trade, or less commonly, may consider product efficacy. It operates independently of the Re-registration and re-approval scheme. Reviews are undertaken on a priority basis in cases where credible safety and/or efficacy concerns have been identified. A chemical review can affect one or more active constituent approvals of a chemical, registration of products containing the chemical, and/or relevant label particulars on product containers. Any of these may be reconsidered more than once. (APVMA)

The reforms were meant for the benefit of human health and environmental flow, to improve access to newer and safer chemistry and to increase community confidence in regulatory outcomes. Among others, one amendment would have addressed conflict of interest by providing for an agency other than APVMA to collect the chemical products levy referred to in the *Agricultural and Veterinary Chemical Products (Collection of Levy) Act 1994*.

The repeal of these reforms degrades the consistency, efficiency and transparency of the Authority and reduces the effectiveness of APVMA's risk framework by preventing reconsiderations of agvet chemical products and their constituents. Current regulatory efforts are not aligned with chemical risk.

Recommendation 1: Where synthetic chemicals are found to cause hazards or risks to human, animal or environmental health, regulatory steps should be taken to remove such chemicals from the market immediately.

Recommendation 2: Reinstate the Chemical Re-approval and Re-registration scheme, cancelled in 2014, in order to implement a rigorous and precautionary process for reviewing latest scientific data on the safety of all farm chemicals, every 15 years (as is required in the US and EU).

The APVMA should deliver regulatory activities to protect the health and safety of people, animals and crops, the environment and trade. Although the role of the APVMA is to independently evaluate the safety of agvet chemicals, it also takes on the role of evaluating performance or efficacy. This is in contrast to the Therapeutics Good Authority that evaluates human products, where the focus is primarily on safety. All APVMA registered products must be shown to be safe. However, the onus is on the regulator to ensure safety, not the applicants and registrants.

To address these issues, the government should embed the precautionary principle into legislation, regulation and practice relating to chemical regulation in Australia.

Precautionary Principle

The precautionary principle is defined in section 391(2) of the *Environmental Protection and Biodiversity Conservation Act 1999* as follows: “*lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.*”

The principle directs that action be taken to reduce risk from chemicals in the face of uncertain but suggestive evidence of harm. The Rio Declaration from the UN Conference on Environment and Development (Principle 15) states: *In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.*

Independent science and research should contribute at all stages to the regulatory process. Most government policy has an underpinning basis of good science and in drafting the

regulations that underpin the policy, it is crucial to ensure that they themselves are based on sound science and that they have processes for enforcement. The principle should underpin the review and amendment of regulation and process for oversight and evaluation. It is fundamental therefore that APVMA appropriately uses science and research findings at all stages of the regulatory process.⁴⁵ An objective, precautionary, and scientific system of farm chemical regulation is essential for public health and safety. The APVMA must use valid scientific methods, rather than internal regulatory processes that do not require further research to ensure health issues are settled before approval.

Precautionary approaches overseas

1. European Union

In 2000, the EU institutions adopted the precautionary principle doctrine, an established standard of behaviour that public authorities may legitimately and should use when they face scientific uncertainty about possible damages to environmental protection, public health or food safety.⁴⁶

The European regulation, the *Registration, Evaluation, Authorisation and Restriction of Chemicals* (REACH), was put into force in 2007 to address the production and use of chemical substances and their potential impacts on human health and the environment.⁴⁷ The regulation overhauled the registration and evaluation of chemicals. REACH requires that companies producing domestic and industrial chemicals identify and manage risks. As the precautionary principle requires, companies have the burden of proof, and if they cannot manage risks, authorities can restrict the use of substances and ensure no hazardous substances are on the market. REACH also promotes alternative methods for the hazard assessment of substances in order to reduce the number of tests on animals.

REACH shares important components with the precautionary principle, but the European Commission has been criticised for not including all. REACH requires important measures are taken to address risk, even where scientific certainty has not been settled.⁴⁸ The science available can then enlighten policy choices in parallel to consultation of stakeholders and the community. In this way, REACH functions by protecting human health and the environment from the risks posed by chemicals while enhancing the competitiveness of the EU chemicals industry.⁴⁹

2. Germany

In Germany, the 2003 Royal Commission on Environmental Pollution recommended:

"[W]here synthetic chemicals are found in elevated concentrations in biological fluids such as breast milk and tissues of humans, marine mammals or top predators, regulatory steps be taken to remove them from the market immediately."⁵⁰

⁴⁵ Ibid.

⁴⁶ Olivier Godard, 2012, *The Precautionary Principle and Chemical Risks*, Centre for National Scientific Research, France, <https://hal.archives-ouvertes.fr/hal-00689761/document>.

⁴⁷ European Chemicals Agency, ECHA, < <https://echa.europa.eu/regulations/reach/understanding-reach>>.

⁴⁸ Olivier Godard, 2012, *The Precautionary Principle and Chemical Risks*, Centre for National Scientific Research, France, <https://hal.archives-ouvertes.fr/hal-00689761/document>.

⁴⁹ Steffen Foss Hansen, Lars Carlsen, Joel A Tickner, Chemicals regulation and precaution: does REACH really incorporate the precautionary principle, *Environmental Science & Policy* Volume 10, Issue 5, August 2007, Pages 395-404

⁵⁰ http://www.pan-germany.org/download/PAN_Briefing_Precavution_060914.pdf

3. United States

The President's Cancer panel concluded in 2010:

"The prevailing regulatory approach in the United States is reactionary rather than precautionary. Instead of requiring industry to prove their safety, the public bears the burden of proving that a given environmental exposure is harmful."

Pesticide regulation in the US is a fundamentally flawed process of "risk assessment" that does not capture the realities of pesticide exposure and the health hazards they pose. EPA officials are reliant on research data submitted by pesticide manufacturers, who advocate to speed up their reviews.

The US Pesticide Action Network has recommended that a better, common sense precautionary approach to protecting us would assess alternatives to highly hazardous pesticides rather than accepting public exposure to pesticides as a necessity for agriculture. Such a shift will require fundamental federal policy reform. Similar to Australia's context, American state and local authorities demand rules that better protect their communities.⁵¹

Recommendation 3: Set up a chemical regulation strategy that promotes the precautionary principle to ensure chemical regulation genuinely prioritises public health, animal welfare, food safety and environmental protection ahead of markets and trade.

Particular matter #2: The funding arrangements of the APVMA, comparisons with equivalent agricultural chemical regulators internationally and any impact these arrangements have on independent evidence-based decision making

The OECD publication *Rara Avis: Searching for Regulatory Independence in its natural habitat* identified regulatory failure where activities are captured by special interests. Regulated industry, government, politicians, and other interest groups have powerful incentives to influence, or capture, regulatory policies.⁵²

APVMA's funding model does impact on the regulator's independent evidence-based decision making. Denying the impacts of their cost recovery funding model on decision-making, APVMA's CEO Chris Parker stated to the ABC, "*Our decisions are our decisions, they're not able to be influenced by politicians or industry*".⁵³

Without doubt, the APVMA's funding model is an 'industry funding' model. One only needs to look to the Australia Securities and Investments Commission's (ASIC's) new model, which is plainly called 'industry funding', where those who create for, and benefit from, ASIC's regulatory activities bear the costs.⁵⁴

⁵¹ <http://www.panna.org/pesticides-big-picture/myths-facts>

⁵² OECD, *Rara Avis? Searching for Regulatory Independence in its natural habitat*, <<http://www.oecd.org/gov/regulatory-policy/rara-avis-regulatory-independence.pdf>>.

⁵³ <https://www.abc.net.au/news/2018-10-08/cancer-council-calls-for-review-amid-roundup-cancer-concerns/10337806>

⁵⁴ <http://aicd.companydirectors.com.au/membership/company-director-magazine/2018-back-editions/july/regulator>

The APVMA's 2012 Cost Recovery Impact Statement (CRIS) shows APVMA are concerned with losing capital and, as a result of product evaluations falling below their 40% target through application fees, increased fees for industry. The logical operation of the APVMA in the current regulatory environment would be to encourage companies to create products for their registration in order to meet targets and increase capital.

The APVMA's [Annual report 2017/18](#) stated that its regulatory charging summary that its external revenue from levies, fees and charges was \$ 33, 392 000. These charges are explicitly the only source of material funding to the Authority, as APVMA does not receive funding from the Government. The Authority only receives funding assistance for specific projects specific projects to improve and/or enhance the APVMA's ability to perform its legislated functions such as the White Paper Reforms and the relocation to Armidale.

Applicants and registrants from industry have expressed their opposition to any registration fees being applied to the APVMA relocation.⁵⁵ The CEO has acknowledged that the cost recovery model presents challenges to the fund the [relocation] move and operations.⁵⁶ This highlights two points: 1) that the regulated industry seek to define how registration fees are spent by APVMA; and 2) that the cost recovery model complicates and hinders the operation of the Authority, and therefore impacts its decision-making capabilities.

National Cost Recovery Guidelines 2015 (the CRGs) state that cost recovery models only be used where appropriate.⁵⁷ Cost recovery models are well established in the Australian regulatory framework, but there are clear concerns as to the ethics and appropriateness of this model for the APVMA.

The APVMA deals with harmful, hazardous and possibly carcinogenic chemicals. These chemicals are at the forefront of regulatory issues of environmental and health safety. There is no doubt about the risk these chemicals pose and the known gaps of knowledge within the discipline of chemistry. This justifies a special attention to the risks potentially raised in relation to the APVMA's funding model.

The principles of the cost recovery model are centred on effectiveness and efficiency to provide a service. As part of the matrix of "effectiveness", regulatory functions should promote ethical regulation and conflict of interest policies that avoid the predispositions that inevitably develop over time in any given sector. This Inquiry Committee should investigate methods of making regulators impervious to industry lobbying through funding polices.

Forms of influence by way of funding can be subtle and the only protection fit for purpose is that which ensures that the costs it incurs for regulating are not entirely met by fees from the industry. Should the funding of the APVMA continue to be largely supported by its fees, the relationship of dependence of the industry on the regulator for its success will continue to operate unchecked. This relationship is described as regulatory capture, where a regulator is financially dependent on the industry it regulates.⁵⁸ A known outcome of regulatory capture is that regulation becomes lenient, putting industry interests above the interests of those the

⁵⁵ <https://www.abc.net.au/news/2018-10-08/cancer-council-calls-for-review-amid-roundup-cancer-concerns/10337806>

⁵⁶ https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Finance_and_Public_Administration/PublicGovernance/~/_/media/Committees/fapa_ctte/PublicGovernance/c03.pdf

⁵⁷ <https://www.finance.gov.au/sites/default/files/australian-government-cost-recovery-guidelines.pdf>

⁵⁸ Council for Evidence-based psychiatry, <http://cepuk.org/unrecognised-facts/regulator-funded-by-industry/>

regulator should serve and protect, namely farmers, farmworkers, landscapers, gardeners, everyday consumers and any ordinary citizen who comes into contact with hazardous chemicals.

A regulatory environment captured by industry can cause detriment to our health system, our regulatory effectiveness and our environment. It is foreseeable that industry would rather be regulated by those financially dependent on it than those fully independent of its influence. For this reason, it is also important that government administration of funding for the APVMA also remains independent of this influence.

Industry stakeholders to this Inquiry evidently want the APVMA to reduce red tape and costs in order for them to register and proceed to market their products. The fees are seen as the sole burden of registrants by applicants. Industry stakeholders have argued that APVMA's cost recovery regulated system poses no scope for undue influence,⁵⁹ but CropLife Australia suggested an alternative public funding arrangement similar to those in operation in other jurisdictions be set up to increase confidence in the APVMA and its independence.⁶⁰

The Inquiry Committee would need to investigate the underlying nature and purpose and viability of alternative funding arrangements. Any arrangement between a government and regulator should require that the fundamental purpose is achieved. In the APVMA's case, the government's future investment into its operations would need to guarantee the Authority's capacity to regulate agvet chemicals. The regulation of agvet chemicals carries a high risk to the public and requires a stronger level of management and monitoring. The relationship between the government and APVMA has not delivered legally enforceable obligations on the regulator, indicating that this long-term relationship should be improved by shifting the burden of proof (of safety) back onto the applicants (manufacturers and patent owners of agvet chemicals).

AFSA submits that industry stakeholders should bear the costs of ensuring the safety of their products. We submit that the sustainability of the cost recovery model depends on the government's improved quality of their agvet chemical policies.

Recommendation 4: Conduct an independent assessment of the appropriateness of the cost recovery model for the APVMA and the alternative funding models available such as federal budget appropriation.

Based on the CRGs, the questions that the Inquiry Committee should be asking include:

1. In the context of the specific policy outcomes and legislation, whether the cost recovery framework is appropriate for a regulator that has been shown consult more with industry, its registrants and appointed reviewers than trusted scientists, such as cancer science experts the IARC.
2. Whether the cost recovery framework principles that underpin the CRG apply with sufficient consideration of the ethics and equity of regulation.
3. Whether cost recovery is warranted where it unduly stifles competition and industry innovation towards alternative, sustainable and ecologically-sound forms of

⁵⁹ CropLife submission to this Inquiry, p.1

⁶⁰https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Finance_and_Public_Administration/PublicGovernance/~/_media/Committees/fapa_ctte/PublicGovernance/c03.pdf

herbicides, insecticides, medicines and others. In addition to innovation, competition in the industry would include traditional knowledge such as forms of pesticide management.

4. Whether the outcomes of the APVMA's model are consistent with policy objectives, especially those relating to ensuring the safety of agvet chemicals.
5. Whether the use of public resources would be properly used by the Authority and whether these resources could improve the independent decision-making of the APVMA.

The sticking point is that independent research and government funding of the APVMA is the alternative, but federal funding towards scientific research has declined drastically.⁶¹ Other OECD countries fare significantly better in terms of federal expenditure on research and development.⁶²

Australia's Code should encourage scientific research that is separate from political, commercial and ideological interests, and enforce violations that prevent funders/sponsors from jeopardising independence in the research process or reporting results which introduce or promulgate bias."⁶³

Other funding arrangements

1. The European Food Safety Authority

The EFSA is funded by the EU and operates independently of the European legislative and executive institutions and EU Member States. It was set up to restore confidence among EU citizens and institutions in the ability of the EU to ensure safety of the food chain.⁶⁴ Under the EU General Food Law, EFSA is responsible for scientific risk assessment and risk management policy, and also has a duty to communicate its scientific findings to the public.⁶⁵

The EFSA has been heavily criticised for not fulfilling this duty, and for the conflicts of interests of the experts on its panels, who have been shown to receive money or be unduly influenced by the food industry.⁶⁶ It was reported last year that 46% the experts from the EFSA have financial conflicts of interest.⁶⁷

In 2017, EU Parliament urged EFSA to cut industry ties.⁶⁸ The EFSA's draft policy on independence received criticism for failing to introduce an effective cooling-off period for experts to avoid conflicts of interest, and for neglecting a key issue, research funding.

⁶¹ The Guardian, <<https://www.theguardian.com/australia-news/2018/jul/10/australias-spending-on-research-plummets-far-below-oecd-average>>.

⁶² The Conversation, <<https://theconversation.com/infographic-how-much-does-australia-spend-on-science-and-research-61094>>.

Australia's 2018/19 science budget:

https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/BudgetReview201516/Science

⁶³ The European Code of Conduct for Research Integrity, 2017, accessed at <<https://www.allen.org/wp-content/uploads/2017/05/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf>>.

⁶⁴ The agency was legally established by the EU under the General Food Law - Regulation 178/2002.

⁶⁵ European Food Safety Authority, <<https://www.efsa.europa.eu/en/aboutefsa>>.

⁶⁶ Corporate Europe Observatory, <<https://corporateeurope.org/efsa/2017/07/industry-edited-efsa-glyphosate-evaluation-ahead-publication>>.

⁶⁷ Corporate Europe Observatory, <<https://corporateeurope.org/pressreleases/2017/06/nearly-half-experts-european-food-safety-authority-have-financial-conflicts>>.

⁶⁸ Corporate Observatory, <<https://corporateeurope.org/food-and-agriculture/efsa>>.

The EFSA responded to this by updating their [policy on independence](#), which now outlines how the EFSA assures the impartiality of professionals contributing to its operations. The policy aims to ensure a risk-based approach to prevent the occurrence of conflicts of interest, transparency and communication on competing interests management, and policy implementation and review.⁶⁹

This policy, which is subject to review every five years and monitored regularly, enforces that research funding from the private sector benefiting EFSA's experts should not exceed 25% of the total research budget.⁷⁰ The APVMA's capital gains from the private sector greatly exceeds this amount.

The EFSA issued a strategic document⁷¹ to accompany that policy and confirm its commitment to independent experts, methods and data from external influence.⁷²

As a way to prevent conflicts of interest, EFSA enforces a two-year cooling off period on managerial, employment, consultancy activities, memberships in scientific advisory bodies undertaken by its experts with, or research funding from, legal entities pursuing private or commercial interests.⁷³ The EFSA's financial regulation is also rigorously managed and governed.⁷⁴

It should be noted, as it was in the Johnson v Monsanto case⁷⁵, that there are flaws with the EFSA's regulatory evaluations for glyphosate. Their methodology for studies on glyphosate is not a model example for other regulators. AFSA highlights only the response of the EFSA to the EU Parliament's direction. This example demonstrates the need for regulators to prevent conflicts of interest in terms of funding and research.

Just as the EFSA is an essential component of the EU food safety system, the APVMA is inseparable from the Australian food system and therefore should also guarantee the protection of public health. As shown by the EFSA, shifts towards independence for public protection can better safeguard health and restore consumer confidence in the food safety system, and this does not preclude enhancing the competitiveness of the food and feed industry or creating jobs.⁷⁶

The APVMA, as a regulator of safety within the food system, ought to draw similar lines relating to financial ties to regulated companies. Business actors' direct or indirect impacts on the operation of the APVMA may be a source of potential conflict of interest irrespective of their

69 European Food Safety Authority, Policy on Independence, <https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/policy_independence.pdf>.

70 European Food Safety Authority, Policy on Independence, <https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/policy_independence.pdf>.

71 European Food Safety Authority, EFSA Strategy 2020 Trusted science for safe food Protecting consumers' health with independent scientific advice on the food chain, 2016.

72 Article 37 (2) of Regulation (EC) No 178/2002 EFSA's founding Regulation.

73 Ibid.

74 European Food Safety Authority Financial Regulations, <https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/finregulation.pdf>.

75 Organic Consumers, < <https://www.organicconsumers.org/blog/kennedy-plaintiff-testifies-monsanto-cancer-trial>>.

Further evidence of flaws in EFSA's assessment of glyphosate: In that matter, an expert witness for the plaintiff pointed out that a reassessment report for glyphosate conducted by a German agency that participated in EFSA's review of glyphosate, contained verbatim passages written by herbicide manufacturers.

76 European Food Safety Authority, Strategy 2020, <https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/strategy2020.pdf?fbclid=IwAR0Ci_DrRln91jE7V6WHiywqj4i_QwB7vlvy4DT2WuwPrto7yM2e8bWn_5I>.

magnitude. The Committee should impose a policy on independence upon on the APVMA which reduces private sector funding to a bare minimum with strict procedures.

Funding for independent science

Many researchers today are concerned that without funding, there will be a loss of independence and many sacrifice motivations to research in order to work.⁷⁷ Declining federal funding is leading towards broader funding collaborations through academic institutions and less maintenance of company laboratories and research centres.⁷⁸

Research as an investment which in turn favours certain projects, such as those that produce marketable products, over the broader contribution of basic research studies that contribute to the greater body of knowledge.

The Inquiry Committee should consider within the scope of this Inquiry the pervasive culture of industry influence in other institutions such as universities, publishers and scientific bodies.

Recommendation 5: All approved and registered agvet chemicals should be subject to independent review, and those reviews should be prioritised where new information arises about the dangers of certain products.

Recommendation 6: Fund independent research bodies to assess the health and environmental impacts of approved agvet chemicals. Chemicals subject to review should be prioritised objectively and independent of the APVMA's prioritised chemicals list.

Recommendation 7: Ensure the industry's specific research responsibilities are observed by updating *the Australian Code for the Responsible Conduct of Research* to better reflect good research practices with appropriate violations provisions.

Creating a culture of independence

The Inquiry Committee should take into consideration reliable resources for creating a culture of independence in our regulatory landscape. The OECD conducts independent and provides evidence-based analyses and recommendations to governments to help create policies of independence.

*"Independence is not a static state achieved once and for all by statute but an active objective which the regulatory agency must be prepared to approach pro-actively and continuously. The question is how to limit undue influence in practice and create a strong culture of independence, requiring a mix of formal and informal, de jure and de facto elements, such as mechanisms that protect from undue influence; a strong internal organisational culture; and appropriate working relationships with the government and other stakeholders. Stakeholders may attempt to apply whatever leverage they can to shape the regulator's behaviour. Mechanisms and safeguards must be in place to shield the regulator from this pressure so that decisions can be made that systematically reflect the public interest. It's not a matter of being defensive, but rather of ensuring the capacity to remain open, confident and ready to engage."*⁷⁹

⁷⁷ The Conversation, <<https://theconversation.com/are-we-funding-the-right-researchers-in-australia-50064>>.

⁷⁸ Enago, <<https://www.enago.com/academy/can-research-be-truly-independent/>>.

⁷⁹ OECD, Rara Avis? Searching for Regulatory Independence in its natural habitat, <<http://www.oecd.org/gov/regulatory-policy/rara-avis-regulatory-independence.pdf>>.

The OECD published a practical guidance [brochure](#) on creating a culture of independence among regulators. These guidelines, developing on the work of the [Governance of Regulators](#) and [performance assessments of regulatory agencies](#) are intended for governments and regulators to protect agencies from undue influence. The brochure has an informal status of guidance and can be used by OECD members, of which Australia is one.⁸⁰

The OECD is of the view that in order to be a “world class regulator”, regulators need to implement impartial, objective and evidence-based decisions that will inspire trust in public institutions and encourage investment.⁸¹ The OECD help governments to restore confidence in markets and the institutions that make them function.

The guidance is structured into five dimensions and proposes necessary institutional measures towards bolstering a culture of independence. One of the key dimensions is financial independence.



This work is based on an analysis of regulators’ institutional processes set out in the *Being an Independent Regulator* report that discusses the results of a unique and confidential survey of 48 regulators across 26 OECD and non-OECD countries. The OECD report *Being an Independent Regulator* should be referred to for more in-depth analysis of the rationale and evidence on the independence of regulators.

Within the APVMA, there is currently a lack of focus on and expertise in public health, animal health and welfare, and environmental research relating to agvet chemicals. APVMA appears to have a culture of disregarding the negative effects of chemicals where sufficient perceived benefit exists for the regulator to justify registering a chemical.

As shown in Moss *Review of the Regulatory Capability and Culture of the Department of Agriculture and Water Resources in the Regulation of Live Animal Exports* in September this year, regulatory culture is inconsistent and ineffective when it lacks consistency. “Culture is “a set of shared values or assumptions. It can be described as the mindset of an organisation” and is important “because it is a key driver of conduct”,⁸²

⁸⁰ OECD <http://www.oecd.org/gov/regulatory-policy/independence-of-regulators.htm>

⁸¹ OECD, Creating a culture of independence, <http://www.oecd.org/gov/regulatory-policy/Culture-of-Independence-Eng-web.pdf>

⁸² *Review of the Regulatory Capability and Culture of the Department of Agriculture and Water Resources in the Regulation of Live Animal Exports*

Without financial independence, the APVMA's conflicts of interest could and may already lead to lenient regulation that places commercial interests above public protection.

The Inquiry Committee should also ensure that the Authority does not treat regulated parties and registrants as customers. How a regulator refers to and acts in response to the organisations it regulates can imply whether they are customer-focused, even where they are not delivering a service or selling products. Regulatory activity that is oriented towards working for and benefiting regulated parties has been shown to limit the effectiveness of regulators.⁸³ In APVMA's case, it is relevant to ask how much choice regulated parties have in the matters of regulation and whether the regulator is acting as a service provider by seeing or treating chemical industry players as clients.

Recommendation 8: Endorse an environment and culture of independence within the APVMA by building independent scientific assessment capacity.

Particular matter #3: The roles and responsibilities of relevant departments and agencies of Commonwealth, state and territory governments in relation to the regulation of pesticides and veterinary chemicals

The government has a responsibility to create regulatory policies for the APVMA and should therefore consider reducing the possibility of regulators being led or funded by the businesses they regulate. Dr Aranda, CEO of Cancer Council Australia, stated:

"Governments have an obligation to fund these kinds of agencies with public money so that that transparency and independence can be assured".⁸⁴

When the APVMA was formed in 1993, the Commonwealth agencies *agreed that specialist assessment advice would be provided by Commonwealth agencies in the areas of environment, human health and occupational health and safety.*⁸⁵ This shows there was intention for the government to have role in providing assistance to the APVMA in terms of advice. APVMA regulates through a [partnership](#) called the NRS, signed between the regulator and the Commonwealth and the States and Territories and agreed on by the Standing Council on Primary Industries. Although most of the APVMA's functions are done in-house, some are outsourced. The Department of Health assist with toxicology work and the Department of Environment assists with environmental assessments.⁸⁶

In response to public and expert concerns over the dangers of agvet chemicals, the advice of the government is needed now more than ever. The support of the Department of Health should be amplified. The APVMA is set up to be independent and should therefore be equipped to heed government recommendations, and to guardedly avoid protecting self-serving and deceptive industry claims and business as usual.

⁸³ Ben Wauchop and Keith Manch, Are regulated parties customers? Policy Quarterly, Volume 13, Issue 4 – November 2017, New Zealand. <https://www.victoria.ac.nz/_data/assets/pdf_file/0004/1175188/Wauchop.pdf>.

⁸⁴ <https://www.abc.net.au/news/2018-10-08/cancer-council-calls-for-review-amid-roundup-cancer-concerns/10337806>

⁸⁵ <https://apvma.gov.au/node/10971>

⁸⁶ Ernst & Young Global Limited, <http://www.agriculture.gov.au/SiteCollectionDocuments/apvma-cost-benefit-analysis.pdf>

State and territory governments are responsible for controlling the use of agvet chemicals after retail sale. However, states and territories have failed to advance national regimes. The 2016 Productivity Commission found that the national harmonised control-of-use regime was inadequate and the lack of progress disappointing.⁸⁷

Local governments across the country are currently looking at weed management issues and putting in place alternatives in their weed management plans.⁸⁸ Numerous municipalities and school districts throughout the country are currently testing alternative herbicides in an effort to curtail or eliminate glyphosate use. Many use steam technologies for weed control on streets and in other public areas. Open Food Network has assisted this process in the Shire of Strathbogie.

The government has a role in funding legitimate, independent scientific research on agvet chemicals. A study has shown that members of the public do not trust scientific research where companies are listed as funders.⁸⁹ The government needs to repair confidence in the regulatory system and to ensure the legitimacy of scientific research.

Recommendation 9: The Commonwealth Government should work with local and state governments to collect evidence about significant human and environmental risks caused by glyphosate, including human hair tests and epidemiological studies.

Recommendation 10: Enhance the role of the Department of Health to protect public health and safety. This could involve assisting state and local governments to control use of agvet chemicals.

Particular matter #4: The need to ensure Australia's farmers have timely access to safe, environmentally sustainable and productivity enhancing products

Studies in developed countries show that annual acute pesticide poisoning affects nearly one in every 5000 agricultural workers.⁹⁰ Farmworkers, rural communities and urban dwellers suffer illness from chemical sprays. However, farmers and workers on farms are most vulnerable. Agvet chemical use imposes burdens on Australian farms and has a material impact on the industry's competitiveness because of the work health and safety risks imposed. Although a December 2015 review of APVMA's compliance with agvet chemical legislation and the *Work Health and Safety Act 2011* urged APVMA to improve worker safety and labelling requirements, more needs to be done to ensure reliable control of agvet chemicals.

To strengthen federal rules protecting workers in the field, Pesticide Action Network in America developed the Equitable Food Initiative, a certification and labelling program that farmworkers, farmers, retailers and consumer advocates to ensure safe, healthy conditions in the fields and quality produce in the markets.

⁸⁷ 2016 Productivity Commission Inquiry Report on the Regulation of Agriculture, <https://www.pc.gov.au/inquiries/completed/agriculture/report/agriculture.pdf>

⁸⁸ Open Food Network

⁸⁹ <http://theconversation.com/people-dont-trust-scientific-research-when-companies-are-involved-76848>

⁹⁰ Thudiyil et al 2008, from p.29 of the IPES Food Report *From Uniformity to Diversity*.

There is currently a groundswell of regenerative agricultural producers across Australia who want worker protection. Many of these producers are seeking non-toxic alternatives for pest, disease and weed management. This has led to a concurrent rise of researchers and small-scale innovators discovering and offering or hoping to offer such products. The current regime of approval is expensive and unwieldy, which may prevent such products from release and as a result deny farmers' access. For products with low risks to users and eaters, a more flexible regime is desired.

Recommendation 11: Support the development of businesses that create, sell and use sustainable alternatives to agvet chemicals, including agroecology and regenerative agriculture, organic alternatives to weed, insect and other pest management, and traditional agricultural pesticides, herbicides, fungicides and potentially veterinary solutions.

Feed

As part of our submission, we demand the Inquiry Commission analyse the effectiveness of the regulation of feed and antibiotics.

In 2015, certain types of animal feed (previously classified as veterinary chemical products) were excluded from regulatory assessment. The *Animal Feed Reform and Other Measures Regulation 2015* took effect on 5 March 2015, excluding certain animal feed products, for both stock and companion animals, from the scope of the APVMA's regulation. These 'excluded nutritional or digestive products' do not require registration. These changes have been added to the *Agricultural and Veterinary Chemicals Code Regulations 1995*. To be excluded under the 2015 reforms, an animal feed product must be one that is fed to, and voluntarily consumed by an animal and must meet certain requirements for ingredients, claims, labelling and manufacture.⁹¹

AFSA is concerned that additives to feed are no longer being assessed. Concerns about GM addition to animal feed in the EU has led to a joint investigation by several EU regulatory authorities and the German consumer protection authority (BVL).⁹² The authorities found that specific animal feed products should never have been marketed.

This year, the EU Commission removed the products from the market.⁹³ The release of GM Vitamin B supplement in animal feed in EU caused anti-biotic resistance and serious threats to health. "*These bacteria were able to spread for several years in animal farming environments, and also pass their resistance on to other disease-causing microbes...This is in effect a massive non-approved release of genetically engineered organisms. It should have been stopped as soon as possible, without delay.*"⁹⁴

The EFSA confirmed the bacteria "*poses a risk for the target species, consumers, users, and the environment due to the presence of genetically modified genes resistant to antibiotics*" of human and veterinary importance".⁹⁵

⁹¹ APVMA, <<https://apvma.gov.au/node/10631>>.

⁹² Joint publication of EU and German authorities: www.sciencedirect.com/science/article/pii/S0308814617304193

⁹³ EU Commission decision: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1543312838912&uri=CELEX:32018R1254>

⁹⁴ Christoph Then for Testbiotech, <http://www.testbiotech.org/en/press-release/genetically-engineered-bacteria-animal-feed-products-are-spreading-resistance>

⁹⁵ EFSA assessment: www.efsa.europa.eu/en/efsajournal/pub/5223 t

The Institute for the Independent Impact Assessment of Biotechnology, Testbiotech believes that in order to prevent uncontrolled spread into the environment, governments need to be vigilant in response organisms manipulated with new methods of genetic engineering, such as CRISPR-Cas.⁹⁶

"To enable independent controls, it is absolutely necessary to make precise data available to show exactly how each organism has been changed. It is especially concerning that the EU Commission is attempting to keep this information secret in future. The EU Commission has, in fact, introduced a new regulation into existing food law for this purpose, Regulation 178/2002. The European Parliament is due to take a vote on this regulation in December 2018,"

- Christoph Then, Testbiotech

A UN report has shown that pesticides cause such damage that their existence can no longer be justified. Pesticides damages animal health, soil health and human health.⁹⁷ Carey Gillam reported that farmers can no longer rely on regulators to ensure the safety of products.⁹⁸ A senior science advisor from the Environmental Working Group in the US stated that:

*"A number of current legal standards for pesticides in food and water do not fully protect public health, and do not reflect the latest science...Legal does not necessarily reflect "safe,""*⁹⁹

Harvard scientists published a commentary stating that more research about potential links between disease and consumption of pesticide residues is "urgently needed" as more than 90% of Americans have pesticide residues in their urine and blood. The scientists discovered that the primary route of exposure to these pesticides is through the food people eat.

The APVMA should be looking at non-toxic feed sources for farmers. AFSA submits that there is a lack of holistic decision-making regarding feed and an unbalanced consideration of costs. Small-scale farmers in our membership have also expressed concerns about the transparency of ingredient lists for feed.

Recommendation 12: Implement codes in Australia based on the [FAO/WHO's Codex Alimentarius' good animal feeding practice guidance](#) for governments. The government should ensure food safety in relation to contaminants and residues of agvet chemicals.

Particular matter #5: The impact of the APVMA's relocation on its capability to undertake chemical reviews in a timely manner

On 23 November 2016, the Minister for Finance made a Government Policy Order under the *Public Governance, Performance and Accountability Act 2013* to relocate the APVMA. The Order is supported by funding of \$25.6 million to and is to be completed in 2019.¹⁰⁰ The decision

⁹⁶ <https://www.gmwatch.org/en/news/latest-news/18606-over-1m-tonnes-of-animal-feed-in-europe-may-contain-banned-gmos-report>

⁹⁷ <https://www.sciencedaily.com/releases/2018/11/181126134257.htm>

⁹⁸ <https://www.ehn.org/when-safe-may-not-really-be-safe-2621578745.html>

⁹⁹ Olga Naidenko, senior science advisor to the non-profit Environmental Working Group

¹⁰⁰ SMH, <https://www.smh.com.au/politics/federal/apvma-to-keep-up-to-40-staff-in-canberra-after-armidale-move-20180702-p4zozp.html>

depleted the number of experienced scientists and reduced the APMVA's capacity perform its functions. A [cost-benefit analysis by consultants Ernst and Young released in 2016](#) found 85% of staff would not want to move and that the relocation risked leaving the pesticides authority unable to replace its technical staff.

The OECD publication, *Being an Independent Regulator*, states:

*"Beyond the institutional set up the way in which regulators attract, retain and motivate staff is a key determinant of the regulator's capacity to act independently and take objective and evidence-based decisions."*¹⁰¹

CEO Chris Parker himself admitted its previous business plan failed to reduce risks the forced move posed to its work.¹⁰² While measures were made to support the Authority to fulfil its statutory obligations under the Agricultural and Veterinary Chemicals Code, the Authority could not stem the damage to its move. Mr Parker *"reached the conclusion that we were not able to mitigate the risks and do our core regulatory duties without another risk mitigation strategy,"*

APVMA has publicly announced that the move will decrease efficiency and increase costs.¹⁰³ While the APVMA continues to try to fill the unit's vacant roles and retain scientists in Canberra, the Authority's performance of its core regulatory duties comes into question.

The Ernst and Young study criticised the economic rationale for the move and found that the benefits to the Australian economy are "modest" and the advantages for the agency itself are "limited".¹⁰⁴

In addition, 20 regulatory scientists and an additional 28 staff members [left the agency between July 2016 and February](#) and the agency saw performance levels plummet. Industry lobby groups including CropLife Australia and Animal Medicines Australia opposed the move to Armidale.¹⁰⁵

ANAO found in their 2017 Report that "[t]here is considerable scope for the APVMA to improve its management of major reform projects, particularly in the context of the Government's decision to relocate the Authority over the next two years".

The move puts at risk the timely regulation of chemicals such as those that have not completed review, years after being identified for review. The regulator has already been shown to miss its own deadlines in the past as indicated by the 2016 Inquiry Report.¹⁰⁶

¹⁰¹ OECD, 2016, Being and Independent Regulator.

¹⁰² Sydney Morning Herald, <<https://www.smh.com.au/politics/federal/apvma-to-keep-up-to-40-staff-in-canberra-after-armidale-move-20180702-p4zozp.html>>.

¹⁰³ SMH, <https://www.smh.com.au/politics/federal/apvma-to-keep-up-to-40-staff-in-canberra-after-armidale-move-20180702-p4zozp.html>

¹⁰⁴ Ernst & Young, <<http://www.agriculture.gov.au/SiteCollectionDocuments/apvma-cost-benefit-analysis.pdf>>.

¹⁰⁵ Canberra Times, <https://www.canberratimes.com.au/public-service/barnaby-joyce-orders-apvma-agriculture-public-servants-to-armidale-in-blatant-pork-barreling-20161125-gsx873.html>

¹⁰⁶ APVMA missed its own deadlines to review a chemical linked to baby brain damage: [ABC article](#) and further evidence in the [2016 Inquiry Report](#) into the regulation of agriculture (page 298).

Alternatives to Pesticides

There are misconceptions that there are no safe or viable alternatives to synthetic fertilisers on the market. Many broad-scale farmers believe that bans on glyphosate will increase overhead costs to farmers and that agvet chemicals other than Roundup are not trusted and are more dangerous. To balance economic, health and environmental interests in this Inquiry, the Government needs to endorse diversified agroecological systems so to remedy the health risks that industrial food and farming systems cause.

Each year, more eaters, chefs and retailers are supporting pesticide-free food that is produced in ethical and ecologically sound ways. The total value of the organic industry has risen 88% since 2012.¹⁰⁷ Australian Organics reported this year that more than 6 in 10 Australian households buy organic in any given year. 'Chemical free' (82%) and 'Additive free' (71%), along with 'Environmentally friendly' (70%) foods are viewed as the large benefits of the organic market.¹⁰⁸ The report also concluded that millennials are becoming more health and environmentally-conscious and educated about benefits of organic. Shifts in consumer preferences have shaped the agricultural landscape. Australia now has the largest area of organic farmland in the world, covering more than 35 million hectares. The industry is expected to increase revenue by over 25% next year.¹⁰⁹ Productivity and yield outcomes of organic have been shown to outperform conventional farms by as much as 80%.¹¹⁰

Despite this, Australia continues to grow more food commodities than it needs to produce for local consumption, and policies are compelled by the myth that population growth requires further demand on the industry to produce more food.¹¹¹ At the same time more than 4 million Australians have experienced food insecurity in the last year.¹¹² Fertilisers and pesticides are seen as fundamental inputs to agricultural, forestry and fisheries practice. In fact, for many OECD countries, crop production has been decoupled from growth in pesticides. Crop production has been boosted by other factors including education and training, payments for beneficial pest management, pesticide taxes, new pesticide products that can be used in smaller doses, and the expansion of organic farming.¹¹³ Agvet chemicals might have increased food production and enabled supermarkets to sell uniformised produce, but Australia now has the worst weed resistance problem in the world, and natural resistance to insecticides and herbicides is only becoming stronger.¹¹⁴

Alternatives to applying chemicals in agricultural and urban settings is the only logical and sustainable solution. The ABS has recommended that the government consider the potential long-term effects on ecosystems and the environment and the merits of alternative production

¹⁰⁷ Australian Organic, <<https://austorganic.com/ao-market-report/>>.

¹⁰⁸ IPES Food Report, From Uniformity to Diversity, p.31.

¹⁰⁹ IBIS World, <<https://www.ibisworld.com.au/industry-trends/market-research-reports/thematic-reports/organic-farming.html>>.

¹¹⁰ Ibid.

¹¹¹ ABS,

<<http://www.abs.gov.au/ausstats/abs@.nsf/7d12b0f6763c78caca257061001cc588/631a36791474cf16ca2581e6000fb26a!OpenDocument>>.

¹¹² FoodBank Report, <<https://www.foodbank.org.au/wp-content/uploads/2018/10/2018-Foodbank-Hunger-Report.pdf>>.

¹¹³ The Conversation, The real cost of pesticides in Australia's food boom, 5 December 2013,

<<https://theconversation.com/the-real-cost-of-pesticides-in-australias-food-boom-20757>>.

¹¹⁴ <https://theconversation.com/the-real-cost-of-pesticides-in-australias-food-boom-20757>

practices such as organic farming by using environmental-economic accounting to weigh up benefits from both a production and ecological point of view.

Academic scientists writing for the Conversation stated:

“Greater support for the development and registration of “softer chemicals” that are less toxic to the farm workers, and the environment, is needed. Australian farming is one of our most trusted industries precisely because we take steps to protect our people and our environment. We can’t get complacent if we’re to maintain that trust.”¹¹⁵

The Inquiry Commission should look at the many policy instruments used overseas to address pesticide pollution. Other nations have used regulatory reform, payments to encourage lower use and more accurate application, pesticide taxes to encourage greater use efficiency by farmers, and advice and information for farmers on best practice.

Examples

1. In 2008 the French government launched “EcoPhyto Plan” with a goal to reduce the use of pesticides and plant protection products by 50% by 2018, with an annual budget of €41 million (A\$61 million).
2. In 2009 the EU adopted “Integrated Pest Management”: legislation to achieve sustainable use of pesticides, and prioritise non-chemical methods. The legislation takes effect in 2014.
3. Research has also shown that native vegetation on farms can support these insect predators and native fauna. Managing vegetation to promote beneficial insects is known as “pest suppressive landscapes”, which could be a part of integrated pest management.
4. Another method may be crop rotation that produces “biofumigation” activity, such as mustards which produce a compound that inhibits fungal growth. These strategies can reduce soil-borne pathogens and break the disease cycle.¹¹⁶

1. Agroecology & Regenerative Agriculture

Ecological agriculture, or agroecology, is an approach to food cultivation that begins from understanding the characteristics, processes, and dynamics of living ecosystems, and the effects of varying degrees of human impact and intervention.¹¹⁷ It seeks to understand in order to work with complex processes for the purposes of management, recognising that humans cannot ever achieve total control, nor should this be the goal. Rather, ecological agriculture seeks to innovate with ecological systems, recognising the central principle of interdependence. A crop field is an ecosystem in which a variety of processes – nutrient cycling, predator/prey interactions competition, commensalism, and successional changes – occur.¹¹⁸ Agroecology’s focus on understanding the form, function, and dynamics of “ecological relations in the field” facilitates improved food production.¹¹⁹ Through farmer-led research, more nutritious food can be produced sustainably, with fewer external inputs, less contamination of environmental systems and less negative impacts on human health.

¹¹⁵ <https://theconversation.com/the-real-cost-of-pesticides-in-australias-food-boom-20757>

¹¹⁶ <https://theconversation.com/the-real-cost-of-pesticides-in-australias-food-boom-20757>

¹¹⁷ Kogan, M. (1998). Integrated pest management: historical perspectives and contemporary developments. *Annual review of entomology*, 43(1), 243-270.

¹¹⁸ Altieri, M. A. (1995; 2018). *Agroecology: the science of sustainable agriculture*. CRC Press.

¹¹⁹ Ibid.

Ecological agriculture offers an alternative paradigm to conventional approaches that seek to exert as much control as possible over perceived threats to crop yields, by eliminating those elements deemed threatening. Conventional approaches focus on “target crops”, rather than the interaction between food crops, other plants, insects, birds, soil microorganisms, water, and so on. An incomplete understanding of the sensitive dynamic balance in ecological systems, sustained by these complex interacting elements, has led to methods of “pest control” (weeds, fungi, insects) that undermine ecological systems, and introduce dramatic changes to delicate complex ecological systems that are poorly understood.

While proponents of systems of control – such as those in GM technology – claim higher yields and benefits for farmers, the evidence is mixed. Research emerging over the last fifteen years is showing increased problems.¹²⁰ Given the increasing incidence of pest (weed, insect, and fungal) resistance to synthetic chemicals, and the risks to human and environmental health, other strategies to enhance food systems should be prioritised.

Jacobsen et al (2013) emphasise that scientific responses to protecting food production should prioritise methods that protect and increase biodiversity, along with the biological factors determining yield: genotype, management, and environment.¹²¹ Together, these methods can inform sustainable approaches to producing sufficient, safe, and nutritious foods. They cite an analysis by Fischer (2009) on the increases in Australian wheat yields over the past 100 years, showing that “management contributed 50–55 % of the yield increases, surpassing genotype (35–40 %), and environment (10–15 %).”¹²² The EU Commissioner for environment has also highlighted the importance of biodiversity.

Diverse cropping systems that focus on management and ecological relationships between diverse species produce more food, with higher nutrition than conventional monocropping systems. A number of studies provide evidence for this: Tilman et al (2001) report a 2.7 increase in yields in a 16-species mixed cropping system compared to conventional monocultures. This has been well-documented in grasslands in Europe, where grassland diversity has been shown to stabilise multiple levels of ecosystem organisation.¹²³ The value of agrobiodiversity has long been recognised: at the 1995 UN conference on Environment and Sustainable Development in Rio, the consensus was that “the world’s food supply and nutrition is most secure if based on the broadest possible range of crops”.¹²⁴ Agroecological practices also reduce chemical use overall, resulting in reduced burden on human health, pollinators, wildlife, and soils and water.

Agroecological approaches are available for everyone to use, and with the appropriate technical, financial, policy, and legislative support, could be utilised widely in Australia. Their emphasis on understanding the ecological relations in any particular environment makes them adaptable to any food production system, and therefore flexible. Conversely, GM technology has a negative impact on biodiversity, which evidence shows is essential for food

¹²⁰ Jacobsen, S. E., Sørensen, M., Pedersen, S. M., & Weiner, J. (2013). Feeding the world: genetically modified crops versus agricultural biodiversity. *Agronomy for sustainable development*, 33(4), 651-662.

¹²¹ Ibid.

¹²² Fischer RA (2009) Farming systems of Australia: exploiting the synergy between genetic improvement and agronomy in crop physiology. In: Sadras V, Calderini D (eds). Elsevier: Amsterdam, pp 23–54

¹²³ Hector A, Loreau M (2005) Relationships between biodiversity and production in grasslands at local and regional scales. In: McGilloway DA (ed) Grassland: a global resource. Wageningen Academic, Wageningen, The Netherlands, pp 295–304

¹²⁴ Jacobsen, S. E., Sørensen, M., Pedersen, S. M., & Weiner, J. (2013). Feeding the world: genetically modified crops versus agricultural biodiversity. *Agronomy for sustainable development*, 33(4), 651-662.

security and nutrition,¹²⁵ and is largely undemocratic in ownership, research, and application.¹²⁶ The companies who control it are concerned primarily with profit-making, not producing sufficient high-quality food. Yet, they receive the majority of agricultural research funding and media attention.

Alternatives to synthetic herbicides:

Biocontrol products

Using biocontrol for pest management prioritises natural interactions that drive inter-species relationships to control the balance of pest populations, rather than eradicating pests entirely. In the EU, macro-organisms (e.g. predators, parasitoid insects, nematodes), are considered plant protection products under the 1107/2009/CEE European regulation.¹²⁷

Bioherbicides:

Bioherbicides are products adapted from natural substances for weed control.¹²⁸ Despite a long history of research into these alternatives to synthetic herbicides, only thirteen biocontrol products are available on the global market. Of these, nine are based on fungal microorganisms, three on bacterial micro-organisms, and one contains an active substance from a natural plant extract.¹²⁹ USA, Canada, the Ukraine, and France are the only countries with bioherbicides available on the market.¹³⁰

Commercially available bioherbicides

Academic Stéphane Cordeau from the French National Institute for Agricultural Research has investigated the impact of cropping systems on weed communities. His [paper on Bioherbicides](#) lists a number of alternative products available commercially or that could be available in Australia.

The Inquiry Committee should refer to this research for a detailed review of existing bioherbicides globally and the reference list.

Integrated weed management (IWM) systems

Bioherbicides can be used in conjunction with IWM methods to increase the overall effectiveness of weed control techniques. IWM Methods include:

Managing soil seed banks by

- increasing soil microorganisms that target weed seeds through improving soil biological activity

¹²⁵ Frison E, Cherfas J, Hodgkin T (2011) Agricultural biodiversity is essential for a sustainable improvement in food and nutrition security. *Sustainability* 3:238–253

¹²⁶ Scientific American (2009) Do seed companies control GM crop research? *Sci Am* 13 August 2009. <http://www.scientificamerican.com/article.cfm?id=do-seed-companies-control-gm-crop-research>

¹²⁷ Villaverde, J.J., Sevilla-Moran, B., Sandín-España, P., López-Goti, C., Alonso-Prados, J.L., 2014. Biopesticides in the framework of the European pesticide regulation (EC) No. 1107/2009. *Pest Manag. Sci.* 70, 2-5

¹²⁸ Bailey, K.L., 2014. In: Abrol, Dharam P. (Ed.), *The Bioherbicide Approach to Weed Control Using Plant Pathogens, Integrated Pest Management: Current Concepts and Ecological Perspective*. Elsevier (Academic Press), pp. 245-26

¹²⁹ Cordeau, S., Triolet, M., Wayman, S., Steinberg, C., & Guillemin, J. P. (2016). Bioherbicides: dead in the water? A review of the existing products for integrated weed management. *Crop protection*, 87, 44-49.

¹³⁰ *Ibid.*

- using bioherbicides that target seeds
- using conservation agriculture in combination with bioherbicides to target weed seeds in the top soil layer
- using no till systems in combination with bioherbicides;
- Improving the effectiveness of mechanical weeding in field crops by using this method when weeds are at seedling stage;
- Choosing crop cultivars that compete with weeds and utilising cover crops to suppress weed growth. Using bioherbicides in combination with mechanical tilling of cover crops rather than synthetic herbicides;
- Using bioherbicides to diversify selection pressure on weeds that have developed tolerance to synthetic herbicides.

Australia should invest into further research, development and regulation of biocontrol methods to increase the availability of these solutions. Bioherbicides should be assessed in conjunction with other weed management techniques to deliver a range of options to farmers.

Integrated Pest Management (IPM)

The FAO defines Integrated Pest Management (IPM) as “the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with *the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms*” (emphasis added).

The FAO promotes IPM as the preferred approach to crop protection and regards it as a pillar of both sustainable intensification of crop production and pesticide risk reduction. As such, IPM is being mainstreamed in FAO activities involving crop production and protection. The FAO IPM programme currently comprises three regional programmes (Asia, Near East and West Africa) and several stand-alone national projects. Under these programmes and projects, FAO provides assistance in capacity building and policy reform, and facilitates collaboration among ongoing National IPM Programmes”.¹³¹

There are pest-management strategies available to large-scale crop production. The [Task Force on Systemic Pesticides](#) identified in their Report, for example, that there are effective alternatives to neonicotinoid and fipronil insecticides.¹³² The Task Force advocates for a new framework for a truly sustainable agricultural model that relies mainly on natural ecosystem services instead of highly toxic chemicals.

[Alternatives Methods in Weed Management](#) by Pesticide Action Network EU provides further information extremely relevant to this Inquiry.¹³³

Protecting crops against damage from weeds, insect pests and disease is an ongoing challenge. Integrated approaches, and chemical control will help Australia to tackle these challenges.

¹³¹ FAO (2018) Integrated Pest Management. Retrieved from <http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/>

¹³² PhysOrg, Springer, February 26, 2018 <<https://phys.org/news/2018-02-global-scientific-reveals-effective-alternatives.html#jCp>>.

¹³³ http://issuu.com/pan-uk/docs/alternative_20methods_20in_20weed_2?e=28041656/55423334

2. Organic alternatives for weed, insect and other pest management

State governments and local councils are already taking precautionary approaches and investigating their use of glyphosate and other hazardous chemicals used for weed control.

For example, the NSW state government has released 'Primefact' [publications](#) on organic weed management by their Organic Farming Liaison officers. The WA Department of Primary Industries and Regional Development and the SA government have published information about natural alternatives to synthetic chemicals. There is a product on the market called "[Local Safe](#)" that has patented ingredients but claims to be a safe alternative to glyphosate. There is another one called [slasher weedkiller](#) which is currently being trialled by the Shire of Broome. There is opportunity to learn from state governments and councils trialling, promoting and adopting alternatives.

3. Traditional agricultural pesticides, herbicides, fungicides, etc.

Traditional pesticides, herbicides and other solutions have been created by Indigenous Peoples and farmers, not scientists or corporations, thousands of years before the Green Revolution. We need to give greater attention to Indigenous knowledge systems, farmer-controlled and researched technologies, and local knowledge of farmers.

Pesticide-free farming is on the rise. Farmers are now using pesticide-free farming techniques to work with nature rather than against it. In India, advocates for pesticide free farming in India such as noted activist and scientist, Dr Vandana Shiva, have denounced pesticides due to their social, economic, and cultural impacts on farmers.¹³⁴ Incidents of Indian farmers committing suicide by drinking the pesticides that destroyed their livelihoods has been documented as a "crisis" by the Journal of Epidemiology and Global Health.¹³⁵ Indebtedness to chemical and agribusiness companies is at the root of over 200,000 farmers' taking their lives since 1997.¹³⁶ India has now banned 18 pesticides.¹³⁷

Neem is one of many pest control agents and has been used by Indian farmers for over 2000 years.¹³⁸ In the Indian state of Andhra Pradesh, in a scheme to promote natural pest resistance, improve soil health and biodiversity, over two million farmers have stopped using synthetics. Women's self-help groups have assisted the scheme, and farmers have saved input costs by using neem, chili and cow urine.¹³⁹

The process of modern agricultural development should support environments, biodiversity, peoples, languages, cultures, and traditional knowledge. In Australia's context, this means more support for Indigenous agriculture, and small-scale farmers who operate without chemicals.

¹³⁴ The Pioneer article, Wednesday, 25 July 2018

<https://www.dailypioneer.com/2018/state-editions/vital-to-shun-pesticides-for-organic-farming-says-vandana-shiva.html>

¹³⁵ <https://www.sciencedirect.com/science/article/pii/S2210600615300277>

¹³⁶ https://www.huffingtonpost.com/vandana-shiva/from-seeds-of-suicide-to_b_192419.html

¹³⁷ <https://www.downtoearth.org.in/news/agriculture/india-bans-18-pesticides-has-many-more-to-go-61405>

¹³⁸ Vandana Shiva, 2005, *Earth Democracy: Justice, Sustainability and Peace*, Zed Books, London, p. 146.

¹³⁹ Al Jazeera, <https://www.aljazeera.com/programmes/earthrise/2013/07/201377990322734.html>

4. Supporting organic growers, certification schemes and health education about food choices

Organic agriculture works within natural systems and avoids the use of pesticides. Many farmers may grow organically or nearly organically but have not applied for certification.

There are several organic certifiers in Australia:

- [Biological Farmers of Australia & BFA Standards](#)
- [Organic Growers of Australia](#)
- [Australian Certified Organic](#)
- [NASAA](#)
- [DEMETER Biodynamic Agriculture in Australia](#)

The Inquiry Commission should investigate how the regulatory landscape can assist farmers to transition to pesticide and GM-free solutions. They should also look at sources of organic certification and assess what would allow these standards to become the norm.¹⁴⁰

Recommendation 11: Support the development of businesses that create, sell and use sustainable alternatives to agvet chemicals, including agroecology and regenerative agriculture, organic alternatives to weed, and pest management, and traditional agricultural pesticides, herbicides, insecticides, fungicides and veterinary medicines.

¹⁴⁰ <https://www.madge.org.au/pesticides-food>

Conclusion

The current public health risks that glyphosate poses require immediate and concerted action to remove dangerous products from the market.

The APVMA's process should ensure that agvet products are registered for use in the market place only when they are safe, efficacious and in a transparent and regulated environment. The Authority needs to be trusted to determine what risks and hazards they are trying to address, what risks are acceptable, and to communicate the value that regulations will bring to reducing that risk.

Should the APVMA remain primarily funded by the chemical companies it regulates, research cannot be conducted independently or with the public interest as the highest priority. Both risks and opportunities are embedded in its cost recovery arrangement; however, with public health, animal welfare and the environment at stake, the Inquiry Committee needs to determine the conditions under which APVMA operates effectively.

The Inquiry Committee should look at possibilities to make the APVMA adapt in response to the complexity of the food chain and the task of risk assessment. Scientific knowledge is evolving rapidly, and this should constantly bring new insights to APVMA's work. Re-assessments of agvet chemicals ought to be regulated and compulsory in favour of the public interest. Monitoring such re-assessments would encourage regulatory independence between the APVMA and the private sector.

Where there are complex food safety questions and emerging new risks and hazards in the food system, changing consumer attitudes and behaviour towards nutrition, food production, and consumption, regulators should adapt accordingly. Regulators should also be perceptive to diversification of diets, consumer demands for chemical-free food, climate change, food waste, agroecology and regenerative agriculture.

Appendix

Bans and restrictions on Glyphosate

Glyphosate has been banned in in a number of countries, cities, towns and villages around the world.

As compiled by [Baum Hedlund Aristei and Goldman Law](#) in the US, the following countries have issued outright bans on glyphosate, imposed restrictions or have issued statements of intention to ban or restrict glyphosate-based herbicides, including Roundup, over health concerns and the Johnson v Monsanto case:

Aalborg, Denmark	Banned glyphosate. ¹⁴¹
Argentina	Over 30,000 health care professionals advocated for a glyphosate ban following the IARC report. ¹⁴² More than 400 towns and cities passed measures restricting glyphosate use. ¹⁴³
Barcelona	Banned glyphosate.
Belgium	Banned individual use of glyphosate. ¹⁴⁴ In 2017, Belgium voted against relicensing glyphosate in the EU. The country was also one of six EU member states to sign a letter to the EU Commission calling for “ an exit plan for glyphosate... ” The city of Brussels banned the use of glyphosate within its territory as part of its “ zero pesticides ” policy.
Bermuda	Outlawed private and commercial sale of all glyphosate-based herbicides. In 2017, the government relaxed its ban on glyphosate, allowing the Department of Environment and Natural Resources to import restricted concentrations of glyphosate for managing roadside weed overgrowth.
Brazil	In August of 2018, a federal judge in Brasilia ruled that new products containing glyphosate could not be registered in the country. Existing regulations concerning glyphosate were also suspended, pending a reevaluation of toxicological data by Anvisa, the country’s health agency. In September of 2018, a Brazilian court overturned the federal judge’s ruling. September marks Brazil’s first month of soybean planting. The country is the largest exporter of soybeans in the world, and as such, has become heavily reliant on agrochemicals. Anvisa issued a statement following the court’s decision to overturn the ruling, saying it will take necessary legal and technical steps in response. Further, Brazil’s Solicitor General’s office has said it is preparing an appeal to the court decision with support from the Agriculture Ministry.
Brussels	Banned glyphosate in March this year and file a complaint against the European Commission with the European Court of Justice (ECJ) over its decision to re-authorise glyphosate, on the grounds on non-respect of the precautionary principle. ¹⁴⁵ However, the EU Commission has since stopped the ban. ¹⁴⁶
Canada	Eight out of the 10 provinces in Canada have some form of restriction on the use of non-essential cosmetic pesticides, including glyphosate. Vancouver has

141 <https://www.thelocal.dk/20170926/danish-city-to-ban-homeowners-use-of-pesticides>

142 <http://www.telesurtv.net/english/news/Latin-American-Organizations-Campaign-to-Ban-Monsanto-20150429-0014.html>

143 <http://www.batimes.com.ar/news/economy/glyphosate-use-on-the-rise-in-argentina-despite-controversy.phtml>

144 <https://www.baumhedlundlaw.com/belgium-glyphosate-ban-individuals/>

145 <https://www.euractiv.com/section/agriculture-food/news/brussels-government-takes-commission-to-eu-court-over-glyphosate>

146 <http://www.brusselstimes.com/brussels/12929/european-commission-rolls-back-brussels-glyphosate-ban>

	banned public and private use of glyphosate, aside from the treatment of invasive weeds.
Colombia	In 2015, Colombia outlawed the use of glyphosate to destroy illegal plantations of coca , the raw ingredient for cocaine, out of concern that glyphosate causes cancer. However, in January of 2017, the country reinstated its controversial glyphosate fumigation program for coca . Unlike the previous program, which used aerial fumigation, the new program consists of manual spraying from the ground.
Denmark	The Danish Working Environment Authority declared glyphosate to be carcinogenic and has recommended a change to less toxic chemicals. Aalborg, one of the largest cities in Denmark, issued private-use glyphosate ban in September of 2017 . In July of 2018, the Danish government implemented new rules banning the use of glyphosate on all post-emergent crops to avoid residues on foods.
El Salvador	Banned glyphosate over links to deadly kidney disease.
England	Following the landmark Johnson v Monsanto case, Homebase, one of England's largest DIY retailers, announced that it would review the sale of Roundup and Ranger Pro . A number of townships, including Brighton, Frensham, Hammersmith & Fulham, Bristol, Glastonbury, Frome, Erewash, North Somerset , Lewes and Wadebridge have also voted to institute restrictions on pesticides and herbicides, including glyphosate.
France	In November of 2017, President Emmanuel Macron announced that France would issue an outright ban on glyphosate within the next three years .
Germany	In January of 2018, Germany's coalition government agreed to begin the process of banning glyphosate . Certain retail stores in Germany have also pulled glyphosate-based herbicides like Roundup from shelves . In November 2018, Federal Minister for the Environment, Svenja Schulze, called for pesticide-free compensation areas and a binding date for the phase-out of glyphosate. ¹⁴⁷
Greece	Greece was one of nine EU countries to vote against relicensing glyphosate in November of 2017. The country was also one of six EU member states to sign a 2018 letter to the European Commission calling for "an exit plan for glyphosate..." According to Greek Minister of Agricultural Development Evangelos Apostolou , "[i]t is our duty to push in the direction of risk management, in the interests of consumers, producers and the environment." In March of 2018, the Greek government approved a five-year license for Monsanto's Roundup against the wishes of Greek environmentalists .
Italy	Italy's Ministry of Health placed a number of restrictions on glyphosate use . Italian legislators have also raised concerns about glyphosate safety, and have come out against relicensing the herbicide in the European Union . In 2016, the Italian government banned the use of glyphosate as a pre-harvest treatment and placed restrictions on glyphosate use in areas frequented by the public . In November of 2017, Italy was one of seven EU nations to vote against relicensing glyphosate. Former Italian Minister of Agriculture Maurizio Martina of the Democratic Party publicly opposed the authorisation of the weedkiller.
Luxembourg	One of Luxembourg's largest supermarket chains removed glyphosate from its shelves following the release of the IARC glyphosate report. Luxembourg was

¹⁴⁷ Sustainable Pulse, <https://sustainablepulse.com/2018/11/11/german-minister-for-environment-pushing-for-end-of-glyphosate/?utm_source=newsletter&utm_medium=email&utm_campaign=gmos_and_pesticides_global_breaking_news&utm_term=2018-11-25#.W_qPMZMzbBI>.

	one of nine EU countries to vote against relicensing glyphosate in November of 2017, and in early 2018, the country signed a letter to the EU Commission calling for “ an exit plan for glyphosate... ”
Malta	Malta began the process of instituting countrywide ban of glyphosate. However, Environment Minister José Herrera backtracked in January of 2017, saying the country would continue to oppose glyphosate in discussions but would fall in line with the European Union and wait for further studies. In November of 2017, Malta was one of nine EU countries to vote against relicensing glyphosate. The country also signed a letter to the EU Commission in 2018 calling for “ an exit plan for glyphosate... ”
Netherlands	Banned all non-commercial use of glyphosate.
New Zealand	The cities of Auckland and Christchurch passed resolutions to reduce the usage of chemicals for weed and pest control in public places. The Physicians and Scientists for Global Responsibility, a New Zealand charitable trust, called for a glyphosate ban in 2015.
Portugal	Prohibits the use of glyphosate in all public spaces . President of the Portuguese Medical Association has also called for a worldwide ban of glyphosate.
Scotland	Aberdeen cut back its use of herbicides and Edinburgh’s City Council voted to phase out glyphosate. In November of 2017, five of Scotland’s six EU parliamentarians voted in favor of a motion that would phase out glyphosate by 2022.
Slovenia	Slovenia was one of six EU member states to sign a 2018 letter to the European Commission citing “concerns” about the risks associated with glyphosate. The letter called upon the Commission to introduce “an exit plan for glyphosate...”
Spain	According to Kistiñe Garcia of the Spanish NGO, Ecologistas en Acción, Barcelona, Madrid, Zaragoza and the region of Extremadura have decided to ban glyphosate. The regions of La Rioja (major Spanish wine region) and Aragon have also approved motions against endocrine disrupting chemicals, which includes glyphosate.
Sri Lanka	Sri Lanka was the first country to issue a nationwide ban on glyphosate. However, in 2018, the government decided to lift the ban due to crop losses and overgrowing weeds.
Sweden	Raised concerns about glyphosate safety and has pushed against relicensing the herbicide in the EU. In 2017, the Swedish Chemicals Agency (SCA) announced it was planning to tighten rules on private use of plant protection products. Under the plan, private users would only be allowed to use products containing “low-risk substances.” According to the SCA, glyphosate is an example of an active substance not expected to be included among low-risk substances, meaning in due time, private consumers may not be permitted to use herbicides containing glyphosate.
Switzerland	Concerned about public wellbeing, the Swiss supermarket chains Migros and Coop removed glyphosate-based products from their shelves due to health risks. In 2017, the Green party put forth a plan to ban glyphosate in Switzerland. The proposed plan was rejected by the Federal Council, Switzerland’s executive.

Villages and cities in Italy, Croatia and Portugal have joined the [European Network of Pesticide-Free cities](#) (PAN Europe), pledging to ban glyphosate and to minimise the use of pesticides and replace them with existing sustainable alternatives.