
1 What is this study about?

Key points

- In response to a request from the Australian Government this study examines Australia's system of chemicals and plastics regulation, including its efficiency and effectiveness in achieving public health, occupational health and safety, environment and national security outcomes. It makes recommendations for reform, including options for improving national uniformity and consistency.
- This study will provide input into the work of a ministerial taskforce established specifically to develop a streamlined and harmonised system of national chemicals and plastics regulation. That taskforce has already reported to COAG on a range of 'early harvest' initiatives, some to be implemented by the end of 2008.
- The scope of the study is broad. It includes chemical and plastic products across various industries, their complete product life cycles, and their regulation across all levels of Australian government.
- While there have been many studies of the chemicals and plastics industry in recent times, none has taken the broad, public interest focus of this study.

Chemicals and plastics are used for many purposes — in food, medicines, agriculture, and industrial and consumer products — and have become integral to the functioning of the Australian economy (appendix C). In 2005-06, for example, the chemicals and plastics industry accounted for around 9 per cent of manufacturing output in Australia and 0.9 per cent of gross domestic product (ABS 2007a, 2007b).

While chemicals and plastics use in Australia is widespread and vital to maintaining our current living standards, some can pose substantial risks to health and the environment. To manage these risks, chemicals and plastics are regulated to various degrees across their manufacture or import, transport, storage, use and disposal.

Since the report of the Taskforce on Reducing the Regulatory Burden on Business (Regulation Taskforce) in 2006, the Australian Government has focused on reforming areas in which there is overly burdensome, inconsistent or duplicative regulation. The chemicals and plastics industry has been identified as one such area. The aim of this commissioned study is to identify ways in which the effectiveness and efficiency of chemicals and plastics regulation could be improved.

1.1 What the Commission has been asked to do

Under the terms of reference, the Productivity Commission was required to undertake three broad tasks:

1. Assess Australia's current system of chemicals and plastics regulation, including its effectiveness and efficiency in achieving public health, occupational health and safety (OHS), environment and national security outcomes.
2. Investigate the costs and benefits of differences between Australian and international regulatory practice.
3. Recommend reforms to the current system of regulation, including options to enhance national uniformity and consistency, streamline data requirements and assessment processes, and use alternatives to regulation.

Under the terms of reference, the Commission is required to have regard to the Council of Australian Government's (COAG) Principles and Guidelines for National Standard Setting and Regulatory Action by Ministerial Councils and Standard Setting Bodies (COAG 2004b).¹

The study has also been guided by the *Productivity Commission Act 1998*, which requires the Commission to take an economy-wide view, promote productivity and the efficient development of Australian industries, and reduce regulation where this is consistent with social and economic goals.

Assessing the economy-wide impacts requires that all economic costs and benefits are considered. These include:

- financial costs and benefits to governments, businesses and consumers
- external costs and benefits including environmental and social costs and benefits.

1.2 Why was it initiated?

On 12 October 2005, the Prime Minister appointed a Taskforce on Reducing the Regulatory Burden on Business to identify options to reduce the compliance burden on business from government regulation. The Regulation Taskforce delivered its final report to the Prime Minister and Treasurer on 31 January 2006, identifying chemicals and plastics regulation as a priority area for review.

¹ This document has subsequently been replaced by Best Practice Regulation: A guide for Ministerial Councils and National Standard Setting Bodies (COAG 2007a).

In particular, the Regulation Taskforce raised concerns about:

- the volume and complexity of existing chemicals and plastics regulations
- duplication and inconsistency between Commonwealth, state and territory regulatory regimes
- the timeliness and cost of regulatory processes
- inadequate recognition of international standards and approval processes
- overly prescriptive regulation of chemicals and plastics labelling.

As one of six recommendations for the industry, the Regulation Taskforce (2006, p. 67) recommended that COAG ‘establish a high-level taskforce to develop an integrated, national chemicals policy’. It also recommended an independent public review of regulation in the industry.

At its 10 February 2006 meeting, COAG agreed to establish a ministerial taskforce — comprising one nominated minister from each jurisdiction — to develop measures ‘to achieve a streamlined and harmonised system of national chemicals and plastics regulation’ (COAG 2006b, p. 6). In its response to the Regulation Taskforce, released on 15 August 2006, the Australian Government (2006) agreed to request the Commission to undertake a review of the industry — the findings of which would provide input into the work of the ministerial taskforce. COAG subsequently noted that the ministerial taskforce would ‘report back to COAG with recommendations ... drawing on the [current] Productivity Commission study and other related activity’ (COAG 2007b, p. 7).

At its March 2008 meeting, COAG further agreed to ‘... accelerating the five remaining COAG hotspots’, which include among others, chemicals and plastics regulatory reform (COAG 2008a, attachment B, p. 1). The Ministerial Taskforce met for the first time on 8 April 2008, and with the support of a Senior Officers Working Group, has subsequently developed a range of initiatives that were considered by COAG on 3 July 2008. These include a range of ‘early harvest’ initiatives that are to be implemented or ratified by COAG before the end of 2008, and some longer-term measures to be implemented after December 2008. These are mentioned, where relevant, in this report.

1.3 Scope of the study

This study adopts a broad definition of regulation, which includes Acts of parliament, subordinate legislation, and other less explicit forms of regulation such as self-regulation (box 1.1). It covers all regulations that specifically address chemicals and plastics.

Box 1.1 **Types of regulation**

Common categories of regulation include:

- *Acts of parliament*, which can also be referred to as *primary legislation*.
- *Subordinate legislation*, which comprises rules or instruments that have the force of law, but which have been made by an authority that parliament has delegated part of its legislative power to. These include statutory rules, ordinances, by-laws, disallowable instruments (such as *regulations*) and other subordinate legislation not subject to parliamentary scrutiny.
- *Coregulation*, which is a hybrid form of regulation for which industry typically develops and administers particular codes, standards or rules, but the government provides formal legislative backing to enable the arrangements to be enforced.
- *Quasi-regulation*, which encompasses those rules, instruments and standards by which government influences business to comply, but do not form part of explicit government regulation. Examples include government-endorsed industry codes of practice or standards, government-issued guidance notes, industry–government agreements and national accreditation schemes.
- *Self-regulation*, where industry formulates rules, standards and codes of conduct, with industry solely responsible for enforcement.

It also covers a variety of quasi-regulatory instruments developed by national bodies such as the Australian Safety and Compensation Council, and the National Transport Commission, among others. These instruments only have force once they are adopted by a jurisdiction under its own legislation, either by being referenced (or applied) or by being copied in whole or in part into regulation. They include model acts, model regulations, standards, and codes of practice. Except where a specific meaning is required, this report uses the general term ‘standard’ to describe all of these instruments, and it refers to the bodies that develop these standards as ‘standard-setting bodies’. This is consistent with COAG’s Best Practice Regulation: A Guide for Ministerial Councils and National Standard-Setting Bodies (COAG 2007a).

Regulation at all levels of government has been considered. In general, ministerial councils set policy, Commonwealth regulators are involved in the assessment and registration of chemicals and plastics, while states and territories typically control their use. The responsibility at the local government level typically includes planning and waste issues. The Commonwealth is also responsible for implementing international agreements and regulating international trade.

Industry coverage is also broad. As specified in the terms of reference, the chemicals and plastics industry is taken to comprise Australian and New Zealand

Standard Industrial Classification (ANZSIC) 2006 subdivision 18 (basic chemical and chemical product manufacturing) — less 184 (pharmaceutical and medicinal product manufacturing) — and subdivision 19 (polymer and rubber product manufacturing) (ABS 2006a). This includes business units mainly engaged in manufacturing:

- gasses (industrial, organic and inorganic)
- chemicals (industrial, organic and inorganic)
- polymers (including tyres, some packaging, foam, adhesive and paint)
- fertilisers
- pesticides
- cleaning compounds
- toiletries
- cosmetics
- photographic chemicals
- explosives
- rubber products (appendix B).

It therefore includes base and feedstock products, speciality and refined chemicals, intermediate goods and components as well as finished products.

Significant exclusions include petroleum and coal product manufacturing (including asphalt and bitumen), alcoholic beverages, food colouring, synthetic textiles, pharmaceutical and medicinal products (ANZSIC 2006, division 184), various paper products and ammunition.

The Commission recognises that the impact of chemicals and plastics regulation extends beyond the strict statistical bounds of the industry. Chemicals and plastics are used widely in the economy, including in industry sectors as diverse as food and packaging and the mining industry, and hence the impact of a particular regulation can be broad.

All stages of the product life cycle of chemicals and plastics — including manufacture or import, transport, storage, use and disposal — have also been considered. In particular, the Commission has sought to identify inconsistencies, instances of duplication and ‘gaps’ in the regulation.

Due to the large number of regulations applying to chemicals and plastics, not every piece of relevant regulation has been reviewed. Instead, the Commission has

focused on identifying broad regulatory problems and solutions, with the aim of producing a more effective and efficient regulatory framework.

1.4 How is this study linked to other reviews?

The plastics and chemicals industry has been the subject of numerous reviews and policy initiatives over many years. Recurring themes have been that regulations are poorly coordinated and complex, with fragmented administration (Allen Consulting Group 2003; CPAASG 2001; CPLG 2004; IC 1995; SBDT 1996). Governments have responded by implementing a number of policy changes, but fundamental concerns about the regulation of chemicals and plastics have persisted.

The Chemicals and Plastics Action Agenda

In 1999, the Australian Government announced a Chemicals and Plastics Action Agenda as part of its industry strategy to build partnerships between industry and government and to promote sustainable economic growth. Its objective was to reform government policies and regulations affecting the chemicals and plastics industry, in order to make the industry more efficient and competitive. A high level group — the Chemicals and Plastics Action Agenda Steering Group (CPAASG) — was established to advise on priorities for the Action Agenda (box 1.2). The CPAASG comprised representatives from Commonwealth, state and territory government agencies, academics, and industry members.

The Australian Government's response to the Action Agenda included establishing a group of industry representatives — the Chemicals and Plastics Leadership Group (CPLG) — to oversee implementation of the CPAASG recommendations (Australian Government 2002). The CPLG was also charged with developing alternative models for a national chemicals policy.

Box 1.2 **The Chemicals and Plastics Action Agenda**

Following extensive consultation, the report of the Chemicals and Plastics Action Agenda Steering Group (CPAASG) called for reform in four policy areas: investment, regulatory reform, education and training, and innovation.

In relation to regulation, the CPAASG found:

- inefficient regulatory systems imposing inappropriate costs
- systematic inflexibility and complexity impeding innovation and growth
- inconsistent treatment and overlapping responsibilities between regulatory agencies and across jurisdictions (CPAASG 2001, p. 27).

The CPAASG also noted that international inconsistencies often resulted in more stringent and costly regulations being enforced in Australia than overseas, resulting in the reduced efficiency and competitiveness of local industry.

The CPAASG made nine recommendations on regulatory reform:

1. All regulation should be consistent with the 1997 COAG principles and guidelines.
2. Mechanisms to ensure consistency with the COAG principles and guidelines should be put in place, including compliance audits.
3. Key national chemicals and plastics regulators should be reviewed.
4. Regulators should recognise data, approvals, definitions and classifications from overseas countries.
5. A national chemicals policy should be developed.
6. There should be enforceable productivity targets for regulators operating under cost recovery.
7. There should be monitoring of regulators in regards to achieving productivity targets.
8. The Australian Government should fund the public good aspects of regulators' activities.
9. Regulatory assessments should be open to alternative service providers.

It also called for the establishment of a Chemicals and Plastics Leadership Group (CPLG) — comprising senior executives from industry and government — to oversee implementation of its recommendations. This and many other recommendations were supported by the Australian Government.

Source: Australian Government (2002); CPAASG (2001); CPLG (2004).

Several of the recommendations made by the CPAASG have been implemented to varying degrees. However, in its final report to the Australian Government in 2004, the CPLG observed that 'while much has been achieved ... there is still much work to be done to meet the goals of the original Action Agenda' (2004, p. 6). It also

noted that the implementation of best practice regulation had been *ad hoc* and piecemeal.

That said, reforms have continued to be implemented since the CPLG's final review in 2004. In particular, fast-track approval processes for low regulatory concern chemicals have been progressively implemented by the Australian Pesticides and Veterinary Medicines Authority (APVMA), and the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) (chapter 4).

A National Framework for Chemicals Environmental Management

In May 2002, the Environment Protection and Heritage Council (EPHC) established the National Taskforce on Chemical Management and Regulation, also known as the National Chemicals Taskforce.² The Taskforce was asked to:

... investigate chemical management frameworks in Australia and to scope the issues associated with, and the need for, a national approach to ecologically sustainable chemicals management. (EPHCNCT 2003, p. v)

This led to a report for consideration by the EPHC and the subsequent establishment of the National Chemicals Working Group. The working group has progressed various initiatives to promote education and information on chemicals. More important, however, has been the development of its Framework for National Chemicals Environmental Management (NChEM). A discussion draft of NChEM was released in July 2006 and ministers subsequently signed a ministerial agreement committing them to implementing NChEM, subject to the outcomes of this study and COAG's response. The agreement detailed an action plan for NChEM including items for immediate delivery, for immediate action, for future work and for input into the COAG National Reform Agenda (chapter 9).

The COAG Review of Hazardous Materials

A COAG review of hazardous materials is also under way. In December 2002, COAG 'agreed to a national review of the regulation, reporting and security around the storage, sale and handling of hazardous materials' (COAG 2002, p. 1). The effectiveness of current arrangements was to be assessed and, where appropriate, specific recommendations made. It was decided that separate reviews would be conducted for four areas: security sensitive ammonium nitrate (SSAN); harmful biological materials; radiological sources; and hazardous chemicals.

² The taskforce comprised representatives from the health, work safety and primary industries ministerial councils and environment protection agencies. It was chaired by the Director-General of the NSW Department of Environment and Conservation.

The review of SSAN was completed in 2004 and following the development of guidelines, states and territories began revising their regulatory controls for its access (COAG 2004a) (chapter 10). The reviews for radiological and biological materials — while outside of the scope of this study — were considered by COAG in April 2007, and recommendations are currently being implemented. A draft report on chemicals of security concern was released in February 2008 (it is expected that the final report will be considered by COAG later in 2008). The draft report proposed new governance arrangements be established for developing responses to managing chemicals of security concern. Comment on these arrangements and the implications for the management of SSAN are addressed in chapter 10.

Other reviews

Several other reviews in response to the Regulation Taskforce's recommendations are either underway or have been completed:

- As part of a rolling program of reviews of regulatory burdens in the economy, the Commission completed a review of the primary sector in December 2007, and is currently reviewing the manufacturing sector and distributive trades:
 - Many participants in the primary sector review expressed concerns about the burden imposed on the agricultural sector through the regulation of farm chemicals. Participants also raised concerns regarding the regulation of ammonium nitrate, and inconsistencies over maximum residue levels in fresh food between food standards and chemicals regulation. The Commission discussed these issues in the report but recommended that they be assessed in greater detail as a part of this study.
 - Some participants in the current manufacturing review raised similar concerns to those raised in the primary sector review, the overlap being that some manufacturers deal with similar regulatory bodies, such as the APVMA. With a manufacturing focus, some participants have also raised concerns about the impact of NICNAS assessment processes (particularly on small business), overlaps and inconsistencies between regulatory agencies, and the imposition of unique Australian regulatory requirements.
- A review of agricultural and veterinary chemicals and products regulated by the APVMA has been initiated by a committee reporting to COAG's Primary Industries Ministerial Council. The review is considering whether different arrangements are needed for high and low risk agricultural and veterinary chemicals respectively (chapter 8).

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- The report of a review of regulations for disinfectant products by NICNAS and the Therapeutic Goods Administration has recently been released. A key issue relates to when testing for efficacy is appropriate and who should be the regulator (chapter 4).
 - The Commission was recently asked to review the Mutual Recognition Agreement and the Trans-Tasman Mutual Recognition Arrangement (TTMRA).
 - Under these schemes, jurisdictions in Australia and New Zealand recognise compliance with each other's laws for the sale of goods and the registration of occupations. But hazardous substances, industrial chemicals and dangerous goods have been exempted from the application of the TTMRA, under one of five special exemptions.
 - In this study, 'mutual recognition and harmonisation with New Zealand' is one factor the Commission is required to consider when investigating the degree to which Australian regulations diverge from accepted standards, and the costs and benefits of those divergences.
 - The Commission will consider the case for the chemicals special exemption in the context of the mutual recognition schemes study, but notes that the very different approaches taken in the two countries creates substantial obstacles for mutual recognition. For example, Australia's industrial chemicals regulator, NICNAS, assesses all new chemicals, whereas the New Zealand regulator only assesses hazardous chemicals, and the two countries define hazardous chemicals differently (sub. DR106, attachment 1).
 - For the purposes of this study, the Commission uses New Zealand and other countries as international benchmarks where appropriate.

1.5 Conduct of the study

The terms of reference for this commissioned study were received from the Treasurer on 27 July 2007. Under the terms of reference, the Commission was to report within 12 months of commencing the study and publish the report.

To ensure broad community input and transparency, the Commission consulted and invited feedback in the following ways:

- After the study was announced, the Commission advertised nationally and promoted the study on its website (<http://www.pc.gov.au/study/chemicalsandplastics/index.html>).

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- A circular was mailed to people and organisations that the Commission thought might be interested in the study. Subsequent circulars were sent to those who had expressed an interest in the study to keep them updated on progress.
 - Informal discussions were held with a wide range of organisations and individuals.
 - An issues paper was released on 7 September 2007 to assist interested parties in preparing submissions to the study.
 - In December 2007, a series of roundtable hearings were held in Canberra to canvas particular issues and options for reform. The roundtables were attended by 59 individuals representing 33 organisations. An additional meeting/roundtable was held in Sydney in May 2008, which addressed environmental management of chemicals. This was attended by members of the NChEM Working Group, and the Centre for International Economics (contracted by the Department of Environment, Water, Heritage and the Arts to undertake a cost–benefit assessment of NChEM).
 - The Commission addressed two meetings of the Ministerial Taskforce, and a meeting of the affiliated Senior Officers Working Group, and is expecting to provide briefings to both groups on this final report.
 - The Commission received 63 submissions prior to releasing the draft report, and 53 between the draft report and the final report.

The Commission thanks all study participants for meeting with Commissioners and staff, facilitating visits to many industry sites and making submissions to the study (appendix A).

