

**Towards Environmental Sustainability
for Chemicals Management in
Australia**



EPHC
Environment Protection and Heritage Council

EPHC

**NChEM: A National Framework for
Chemicals Management in Australia -
Discussion Paper**

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Note

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FOREWORD

In 2002, the Environment Protection and Heritage Council of Environment Ministers from Australia and New Zealand (EPHC) set up a National Chemicals Taskforce, which included representatives from Health, Primary Industries and Workplace Relations Ministerial councils. The Taskforce conducted a scoping study into how Australia's chemicals management systems dealt with the environmental impacts of chemicals. The Taskforce conducted extensive consultations, listened to all stakeholders and concluded that there was an important need to improve the way chemicals were managed from an environmental perspective.

In response, the EPHC established a National Chemicals Working Group of environment agencies (chaired by the NSW Department of Environment and Conservation), to develop a proposal for a national approach to managing the environmental risks from chemicals – an environmental framework for our future. A work program was approved in 2003 that included both short and long-term projects.

The Working Group has delivered two projects to date that have significantly boosted our ability to access and understand information about chemicals and the environment. They are the National Chemical Information Gateway and the National Chemical Reference Guide, which are both internet-based resources on chemicals. A third project, being developed in NSW, is a prototype household chemicals education program that will be made available for use by other jurisdictions (further information about each of these projects can be found in Section 6).

The Working Group's major long-term project is to develop a National framework for **Chemicals Environmental Management in Australia (NChEM)**. It aims to:

1. provide a more **streamlined, transparent and nationally consistent** approach to environmental chemicals management, and
2. improve key **environmental outcomes** in chemicals management.

These aims can be achieved by:

- facilitating better consideration of environmental impacts in chemical assessments;
- agreeing on nationally consistent actions to control chemicals of high risk to the environment (overcoming fragmented regulations);
- improving information capture and feedback on chemical use and impacts to better inform decision making on chemicals management;
- better consideration of priority and emerging environmental chemical issues, so the likelihood of costly future chemical legacies to our environment is reduced, and for improved protection of the environment, human health and trade; and
- improving public opportunities for involvement in setting future environmental directions for chemicals.

This discussion paper describes the NChEM proposals and the key benefits they would deliver to the community and industry. The EPHC is seeking public comment on these proposals, and information on their likely social and economic costs and benefits.

NChEM supports the agenda announced by the Council of Australian Governments (COAG) in February 2006 to ensure regulatory best-practice and to reduce the regulatory burden on business in the area of chemicals and plastics, one of several regulation 'hot-spot' areas that COAG is targeting.

If you would like to provide comment on these proposals, see part 7 – How to have your say. For further information please contact the EPHC Chemicals Working Group representative in your State or Territory – contact details are provided on page 34.

GLOSSARY

AERP	Adverse Experience Reporting Program
Agricultural and veterinary chemicals	Includes pesticides such as herbicides, insecticides, fungicides, termiticides and nematocides, and veterinary medicines
Agvet chemicals	agricultural and veterinary chemicals
APVMA	Australian Pesticides and Veterinary Medicines Authority
COAG	Council of Australian Governments
DEH	Australian Government Department of the Environment and Heritage
Environment agencies	Departments of the Environment and Environment Protection Authorities of the State, Territory and Australian governments
EPHC	Environment Protection and Heritage Council
Existing chemicals	Industrial and agvet chemicals introduced into Australia by industry prior to 1990 for industrial chemicals (the year NICNAS was established) and prior to 1994 for agvets (the year APVMA was established). Under both the NICNAS Act and AgVet Code existing chemicals were permitted to be used in Australia without having to be assessed by NICNAS or the APVMA.
FSANZ	Food Standards Australia and New Zealand
GHS	Globally Harmonised System of Classification and Labelling of Chemicals (GHS), a United Nations sponsored program to bring consistency in the classification and labelling of chemicals worldwide
Industrial chemicals	Any chemical used for an industrial use (including an industrial process or product, or consumer product such as cosmetics) and other than agvet chemicals, therapeutic or pharmaceutical chemicals, food additives or radioactive chemicals
National chemicals regulators	NICNAS and APVMA
NChEM	National framework for C hemicals E nvironmental M anagement
New chemicals	Industrial chemicals introduced into Australia after 1990
NICNAS	National Industrial Chemicals Notification and Assessment Scheme
OECD	Organisation for Economic Co-operation and Development
PFOA	Perfluoro Octanoic Acid
REACH	R egistration, E valuation and A uthorisation of C hemicals – the European Union’s proposed new chemicals management system from 2008.
RLC	Registration Liaison Committee
SAICM	Strategic Approach to International Chemicals Management
TGA	Therapeutic Goods Administration
US EPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

Why are chemicals on the environmental agenda?

Chemicals are used everywhere. They are essential components in the production of the foods, equipment, fuels, goods, cosmetics, and medicines that maintain and improve our quality of life. When appropriately managed, they deliver major benefits to the community in the fields of agriculture, medicines, manufacturing and in and around the home. There are around 50,000 industrial, agricultural and veterinary chemicals available for use in Australia, and between 70,000 and 100,000 chemicals in use worldwide. Along with their many benefits, in some circumstances they can cause harmful impacts on the environment and public health, ranging from fish kills to potential long-term chronic impacts on children's health and development.

With global production, trade, use and disposal of chemicals increasing, there is mounting public demand for greater confidence in the sound management of chemicals. We are also being faced with mounting costs to industry, governments and society from past mismanagement. For some chemicals it is not possible to prevent or minimise harmful adverse impacts and they have either been removed from use or not approved for use in the first place.

Internationally, chemicals are a focus of attention. The Organisation for Economic Co-operation and Development (OECD) Environment Outlook to 2020 has identified chemicals management as a red light issue, noting that persistent and toxic chemicals will continue to be widespread in the environment over the next 20 years, with potentially serious impacts on the environment and human health. In February 2006 at the International Conference on Chemicals Management, a new global initiative was agreed, the Strategic Approach to International Chemicals Management (SAICM), that aims to make chemicals safer for humans and the planet.

EPHC National Chemicals Taskforce

Chemical responsibilities in Australia are very complex. They cross multiple policy portfolios (public health, primary industries, worker safety and environment), numerous government departments and agencies, and involve all levels of government. There are four main management schemes that cover industrial chemicals, agricultural chemicals (pesticides and veterinary medicines), food additives and therapeutic goods (drugs and medicines). There are mechanisms in place to manage the overlap between these highly complex systems to ensure important and emerging issues are captured. However, the complexity of the chemicals management regime in Australia has led to some fragmentation of the system with a range of competing priorities (industry development, economic/trade management, protection of public health, disease prevention/management, and environment protection).

EPHC looked at Australia's chemical management systems in 2003 and found that there were significant areas where improvements could be made to better promote ecologically sustainable management of chemicals in Australia, particularly in a global climate of rapid reform and increasing community concern.

Environment Ministers agreed to spearhead a new approach to improve chemicals management in Australia by better protecting Australia's environment against the risk of chemical contamination and streamlining and simplifying environmental chemical controls through a co-operative national approach to the safe and sustainable use of chemicals. Clear and nationally consistent risk management actions would help overcome the complex maze of regulations and improve the way the environmental impacts of higher risk chemicals are minimised and controlled.

This new approach helps address industry needs for a more streamlined regulatory system and supports the agenda recently announced by COAG to ensure regulatory best practice and reduce the regulatory burden on business in the area of chemicals and plastics. It does this by reducing

fragmentation of environmental chemicals regulation across Australia, as well as better integrating national chemical assessments with State and Territory management approaches. For environment issues it reduces complexity and improves consistency, leading to significant environmental and economic benefits for industry and the community.

Focus on Industrial Chemicals Systems

EPHC has identified that the most effective way to make improvements to the environmental management of chemicals is to focus on the areas where significant gains can be made to the current systems in the near future, and to review other areas at a later stage. Through NChEM, EPHC is focussing on improving environmental and health outcomes (where environmental exposure leads to health impacts) within the **industrial chemicals management system** as a priority. NChEM is also proposing some targeted improvements to the **agricultural and veterinary chemicals** (agvet chemicals) system administered by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

There are some 40,000 industrial chemicals in use in Australia, of which around 38,000 are 'existing' chemicals (introduced pre-1990). While many of these existing chemicals may have been used for years without any apparent adverse consequences, unlike new chemicals, the existing chemicals have never been subject to modern assessment. Some of these chemicals are now regarded as high risk around the world. Australia does not have a systematic or transparent approach for targeting and assessing the most harmful of these existing chemicals. Nor does Australia have a well developed approach for minimising environmental impacts of industrial chemicals. Further, industry has identified the need to streamline the complex regulatory regime that businesses must navigate to introduce, manufacture or use new industrial chemicals in Australia.

What is NChEM?

EPHC is proposing a National framework for **Chemicals Environmental Management** ("NChEM") to improve the way environmental impacts of chemicals are managed in Australia. NChEM aims to ensure that environmental considerations are fully integrated into Australian chemicals management systems, reduce the fragmentation and improve the streamlining of regulation and co-ordination of efforts across the various levels of government.

NChEM is designed to:

1. give the public greater confidence that potentially harmful high risk chemicals are subject to appropriate and consistent controls across the nation;
2. make it simpler and more cost effective for industry to manage the environmental implications of chemicals by:
 - streamlining current systems,
 - reducing fragmentation, and
 - bringing transparency, simplicity and consistency; and
3. increase our information about and understanding of chemicals and the environment so that governments, industry, chemical users and the community can make informed choices about chemicals; and help identify areas needing greater attention so that resources can be allocated strategically and proactively to produce improved outcomes for the community, the economy and the environment.

The key elements of NChEM are a set of four linked action areas:

1. **Strengthening Environmental Risk Assessment** – better consideration of environmental impacts in national chemical assessments;
2. **Streamlining Environmental Controls** – nationally agreed actions to control risks to the environment from high risk chemicals across all States and Territories;

3. **Informing Decisions** – improving the capture of chemical impact information so that it is used effectively to inform decision making on chemicals; and
4. **Prioritising Action** – strategic consideration of priority and emerging chemical issues affecting the environment.

The four key action areas are described in greater detail below.

These action areas are to be supported by strengthened consultation between national chemicals regulators and Australian Government and State and Territory environment agencies, and by providing better opportunities for public, industry and chemical user participation in decision making on chemicals. Achieving the outcomes of these key action areas will satisfy many stakeholder needs and position Australia to keep pace with evolving international developments in chemicals management.

1. Strengthening Environmental Risk Assessment

The first step in managing chemicals includes assessing the risks to human health and the environment. NChEM is seeking to improve methodologies used to assess environmental chemical risks, and strengthen consultative mechanisms between national chemicals regulators and Australian Government and State and Territory environment agencies, with the aim of better upfront identification of chemical risks and ways to prevent impacts. The proposals under this action area apply to both industrial and agvet chemicals and include:

- providing environmental risk assessors, jurisdictions, industry and the public with **Environmental Risk Assessment Manuals**, which will be best practice reference guidance documents on how environmental risk assessments are undertaken.
- better environmental input into risk assessments by improved liaison and consultation between national chemicals regulators and Australian Government and State and Territory environment agencies, including improved linkages between environment agencies and the government liaison committees of the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) and APVMA.
- strengthened environmental assessment of agvet chemicals, particularly in the areas of disposal, non-active ingredients and the volatility of product formulations; and articles treated with agvet chemicals.

2. Streamlining Environmental Controls

NChEM also aims to improve consistency in environmental regulation and management of chemicals so that industry can plan for and manage its business with greater certainty and governments can make better strategic use of resources through practical and joint approaches. In this regard NChEM acknowledges the effectiveness of the current agvet system. For the industrial chemical management system the key NChEM proposals for streamlining environmental controls include:

- enhancing NICNAS' current role (currently NICNAS has only limited ability to control the environmental impacts of chemicals e.g. where chemicals are subject to international treaties) to include the role of deciding which chemicals are allowed to be used in Australia and under what conditions they may be used. This involves augmenting NICNAS' powers to control the importation, manufacture, supply and use of chemicals, through the ability to suspend, prohibit, phase out and restrict the use of chemicals where there are high risks that cannot otherwise be controlled;
- currently the States and Territories are not required to implement recommendations made by NICNAS, and the controls available to the States and Territories to manage chemicals often differ. Under NChEM, States and Territories would agree to enforce NICNAS controls in their jurisdictions, and would review their legislation to ensure they have adequate powers to

implement this complementary legislative framework for the environmental control of chemicals. State and Territory legislation would allow for NICNAS decisions to be consistently adopted and enforced by the States and Territories; and

- underpinning this approach would be a *Manual of Environmental Controls* that sets out the powers and management tools available to NICNAS and the States and Territories to control the environmental impacts of industrial chemicals.

3. Informing Decisions

NChEM is seeking to improve feedback on chemical impacts to better inform decisions thereby ensuring that solutions are practical, fit the problem and are informed by on-ground experience. The information feedback proposals fall into three categories:

1. NChEM proposes a process for States and Territories to feed back information to national chemicals regulators on the effectiveness of controls used to manage a chemical of high environmental concern, following an assessment of a new chemical or an existing chemical review.
2. National chemicals regulators to have information capture systems that allow the public, industry, users and other government agencies to easily provide information on impacts and concerns about chemicals and be confident that the information will be considered as part of the management of those chemicals (noting that the APVMA has a system in place).
3. In certain situations where the potential risks to the environment from the chemical could be high, national chemical regulators may wish to require an entity that manufactures or imports a chemical or uses a certain chemical, to provide post-assessment information about that chemical (eg location and volumes of chemical actually used) to assist with detection of any unintended exposure or impact from the chemical when used as permitted. This information gathering would only be required in a small number of cases where the potential risks to the environment from the chemical could be high, and would be in response to a direct assessment recommendation where further information may be needed to verify the accuracy of data and assumptions used in an assessment.

4. Prioritising Action

An essential component of the NChEM proposals is the ability to identify the highest areas of environmental concern to enable Environment Ministers to be pro-active and strategically focussed in addressing chemical issues early and preventing future chemical pollution legacies. Providing stakeholders and the public with an avenue to express their views on what they believe should be the chemical priorities for government is an important aspect to satisfying this goal. To assist EPHC determine environmental priorities for chemicals, a new national priority setting focus to identify chemical issues of environmental concern is proposed that:

- is informed by public and expert technical input;
- keeps abreast of and filters new information on Australian and international information and research on chemicals;
- prioritises issues based on transparent criteria;
- supports the existing chemical review programs of NICNAS and APVMA by identifying and feeding environmental priorities into national assessment processes in a unified, streamlined and consistent manner; and
- uses the capacity of Environment Ministers to take direct action on chemical priorities or refer matters to the chemicals regulators or other bodies, where that is the best path forward.

A nationally co-ordinated priority setting process would save governments and communities resources and time by identifying issues and actions at an early stage that may prevent expensive chemical legacies from occurring down the track. Industry, users and community stakeholders would be involved through a forum that could generate ideas, innovations and co-operative strategies for more effectively dealing with chemical problems, and potentially minimise the need for expensive, resource intensive regulations.

Linking the environment to chemical management systems

The NChEM proposals are designed to build on and strengthen the current approaches to environment protection within Australia's chemical management systems. They link effectively to the systems already in place for managing chemicals from occupational health and safety, dangerous goods, trade and public health perspectives.

A model for the whole system

The Council of Australian Government's has identified the chemicals and plastics industry as a "hot spot" for regulatory reform. While the NChEM proposals are focussed on the environment, they present a practical approach for streamlining the environmental management of chemicals that is capable of being applied more broadly across the chemical management system as a whole. COAG and Environment Ministers will be working together to ensure that system wide reforms are informed by the NChEM model.

There are a range of reform processes already being pursued within existing systems (such as the NICNAS review of the Existing Chemicals Assessment Program, and work being undertaken for Primary Industries Ministers on national accreditation and trialling a system to capture agvet chemical usage information). Environment Ministers will continue to work co-operatively with these groups to ensure programs are linked, consistent, productive and efficient.

What are the benefits and costs of NChEM?

Improving the ecologically sustainable use of chemicals in Australia will yield significant economic, social and environmental benefits for the Australian community and environment. EPHC is preparing a detailed social and economic analysis of the NChEM proposals that will take into account comments on this discussion paper. One of the aims of releasing this discussion paper is to seek information from industry, users, the community and government on the benefits, costs and other issues arising from the proposals, including specific impacts on individuals, businesses and organisations.

The NChEM proposals will help to increase community confidence in how the environmental impacts of chemicals are managed in Australia. The proposals are built around better public access to information on chemicals, better environmental outcomes being delivered for chemicals, improved community participation in chemical management processes, and more focussed chemical controls for chemicals of high concern.

Industry is likely to be a major beneficiary of the streamlining and reduced fragmentation of environmental chemicals regulation across Australia, as well as the improved integration of national chemical assessments with State and Territory management approaches. This will reduce complexity and improve consistency in chemicals management, and assist to reduce the regulatory burden on business in line with COAG's regulatory reform agenda, leading to significant economic benefits for industry. Inconsistency of chemical controls applied by States and Territories should diminish, creating a more level playing field across the country. There are likely to be tighter controls for some higher risk chemicals that industry may need to adjust to, including the potential for phasing out over time the most harmful chemicals.

Greater interaction and co-operation between national chemical regulators, the Australian Government environment agency and State and Territory environment agencies will lead to improved environmental outcomes for chemicals and more efficient use of resources. NChEM should see greater upfront resourcing of chemicals management in each jurisdiction, which will enable more issues to be addressed early so that problems down the track are prevented and the need for costly, resource intensive 'clean-up' of chemical legacies is reduced over time.

Implementing NChEM

It is proposed that NChEM be implemented in the following ways:

- Through an inter-governmental agreement on managing chemicals in the environment. The parties to the agreement would be the Australian Government, and each of the States and Territories.
- EPHC would have an ongoing role and prime responsibility for implementing the agreement and reporting to COAG on progress.
- Australian Government chemicals assessment agencies (DEH, NICNAS and APVMA), and the State and Territory environment agencies would carry the major effort of implementing NChEM.
- Legislative review and changes may be necessary to ensure NICNAS and to a lesser extent APVMA, have the legislative powers to improve outcomes sought in chemical risk assessments, to better control and manage chemicals and ensure good information feedback on the impacts of chemicals in use.
- States and Territories will need to review to what extent their current legislation is adequate to implement and enforce national decisions, or whether new legislative linkages may be needed.
- Members of the community, users and industry will have an important role to play in assisting to implement the priority setting process. The stakeholder forum will need the contribution of industry, users and community to bring forward chemicals issues of concern and to help forge possible solutions to some of these issues to recommend to Environment Ministers.

Structure of Paper

The structure of the discussion paper is set out below.

- Part 1 Sets the scene about why chemicals are on the agenda both in Australia and internationally.
- Part 2 Explains why NChEM is needed.
- Part 3 Describes the key NChEM proposals in detail.
- Part 4 Highlights the main benefits of NChEM for all stakeholder groups and how environmental outcomes would be improved.
- Part 5 Explains how NChEM will be implemented and the roles to be played by the various arms of government and key bodies.
- Part 6 Describes the short-term projects the Chemicals Working Group has delivered to date.
- Part 7 Invites comments on NChEM and seeks information about costs and benefits. Contact details for each jurisdiction are listed.

1.1 WHY ARE CHEMICALS ON THE ENVIRONMENTAL AGENDA?

There are around 50,000 industrial, agricultural and veterinary chemicals available for use in Australia. Worldwide there are between 70,000 and 100,000 of these chemicals. The vast majority of the chemicals used in Australia were developed and introduced in the earlier part of the 20th century without being subjected to the modern assessment processes that were set up in the 1980s and 90s. **New chemicals**, those introduced since about 1990, undergo an assessment of their potential health and environmental impacts, and manufacturers and importers are required to provide significant amounts of information about these chemicals to the regulatory authorities. Yet 99% of the numbers of chemicals available for use in Australia are **old chemicals** (pre-1990). While many of these may have been used for years without apparent adverse consequences, they were never assessed for their potential to impact human health and the environment.

In response to this 'information and understanding gap' with old chemicals, a significant amount of international research has occurred in recent years and a number of OECD countries are moving to strengthen their chemicals management systems. This research, as well as our experience with chemicals, is leading to a better understanding about chemicals and where there may be the potential for long-term impacts on the environment and human health. It also highlights how much we still have to learn about chemicals and their impacts.

Industry has argued that there are more environmentally friendly substances and products that could be substituted for some of the older, more harmful chemicals but the regulatory process is too complex and too costly to bring them into the 'small market' of Australia. Although it is important that all chemicals continue to be assessed for the potential risks they may pose in the Australian situation, this viewpoint supports the need for a more streamlined regulatory approach to environmental chemicals management.

Examples of Chemicals Impacts

Environmental

- Nonyl phenol ethoxylates, a commonly used group of industrial detergents, have been found in sewage effluent in Australia and a range of other countries at concentrations that would be likely to cause adverse environmental effects. They are used in industrial and domestic cleaning products, pesticides and paints, and other products as wetting agents. At the concentrations found these chemicals can kill fish and other aquatic organisms as well as impact on reproduction (they are endocrine disrupting chemicals) and development. The UK has investigated effects on reproduction in fish around sewage treatment plants for more than a decade and found that this chemical contributed significantly to these effects in some locations. As there are a number of alternative chemicals, the UK banned the use of this group of chemicals for a wide range of uses from January 2005. The European Chemicals Bureau has completed a full risk assessment on these chemicals that showed they were likely to impact on the environment from many of their uses, and it was banned from use in a range of products in 2003. In Australia, they are listed for a chemical review assessment by NICNAS but as yet no review has commenced. Given the moves overseas on these chemicals, this is an example of the type of chemicals Environment Ministers may prioritise for action once the mechanisms in NChEM are in place.
- Pesticides are widely used in Australia in agriculture on fruit, vegetables, broad acre field crops (e.g. cotton, canola) and pasture to control a wide variety of pests, in homes and buildings to control pests including termites, and on golf courses, parks and playing fields to control turf pests. Queensland and NSW have both experienced significant fish kills caused by pesticides over a number of years. In one incident at a golf course a pesticide was washed into a nearby lagoon and 4 tonnes of dead fish, ducks and geese were collected during the clean up. A stronger role for environment agencies in setting priorities for action on chemicals of concern and setting appropriate environmental controls can help prevent such events from recurring.

Health and Environment

- Every year the US Government's Center for Disease Control and Prevention conducts a large study of chemical exposures to the general population. The most recent study in 2005 was the largest study to date of chemical exposure in humans. The study looked for 148 chemicals in blood and urine samples of about 11,000 people. The findings provided better information about exposure to pyrethroid pesticides (found in most household pesticides) and phthalate plasticisers (found in nail polish and other beauty products as well as in soft toys), with widespread exposure evidenced in the population sampled. The study also highlighted the benefit of control strategies for lead (removed from petrol and other products) and organochlorine pesticides (banned internationally in 1990s), as blood lead levels in children and organochlorine levels have decreased with each study. This work demonstrates control strategies do work, and Australia needs to ensure its chemicals regulatory system has the capacity to take swift action on chemicals identified as posing unacceptable health and environmental health risks.
- **Perfluoro Octanoic Acid (PFOA)**, a perfluorinated chemical, has been under the spotlight of regulators both overseas and in Australia. This chemical has been used in a range of applications including as coatings on metal surfaces such as non-stick cookware, and on fabrics such as carpets to improve stain resistance and cleaning. PFOA is used to make Teflon, which is used in non-stick cookware. PFOA does not biodegrade to any extent in the environment, accumulates in fish and wildlife and is toxic to mammals. The US EPA recently stated that perfluorinated chemicals could no longer be presumed not to pose an unreasonable risk to human health or the environment and, as a result, is proposing to require more extensive assessment of any new fluorinated polymers. The USEPA has recently brokered an agreement with eight of the world's major manufacturers to voluntarily reduce the presence of PFOA by 95% in four years time, and eliminate them by 2015. In Australia, in 2004 NICNAS alerted industry to reduce the use of PFOA because of potential environmental and health concerns. Australian Environment agencies can play a key role in progressing Australia's response to these issues, helping to work with industry to reduce risks to the public and the environment.

Economic legacies

- In late 2005, samples of prawns and fish from Sydney Harbour were found to have high levels of dioxins, a group of highly toxic compounds that can cause acute and chronic health effects in humans. The dioxins are believed to have formed as a by-product of past industrial activity carried out on the foreshore of the Harbour. Because of the potential public health risk the NSW Government has imposed a ban on all commercial fishing in the Harbour until 2011. The livelihoods of commercial fishing operators have been impacted and the Government has announced a \$5.8 million package that includes buying out the fishing licences and conducting further sampling of seafood from Sydney Harbour to monitor dioxins levels.
- Rhodes Peninsula is prime land on the foreshore of Sydney Harbour where past industrial activity has left a legacy of chemical contamination. The land was contaminated with chemicals from the production of timber preservatives, pesticides, chlorine gas and plastics. The Peninsula is now being converted to residential use and sophisticated treatment processes are underway to decontaminate the land at a total cost to the landowners of almost \$120 million. The NSW Government is also contributing \$20 million to remediate sediments in Homebush Bay that adjoins the Peninsula. This is in addition to the \$137 million the NSW Government spent to clean up chemical legacies around the Olympics Site before the Sydney Olympics in 2000.
- Past chemicals use has left expensive and difficult to manage land and groundwater contamination as well as hazardous waste disposal legacies. In NSW, \$167 million has so far been committed to cleaning up chemically contaminated groundwater emanating from an industrial site in Botany. The treatment plant may run for as long as 30 years before the groundwater no longer poses a threat to Botany Bay. A chemical manufacturer also expects to spend \$80 million to dispose of 60,000 drums of hexachlorobenzene waste that is stored at its plant at Botany.

Waste

- In 1999, Commonwealth, State and Territory Governments launched a \$27 million program ChemCollect, for the collection and safe disposal of unwanted and deregistered farm chemicals. 1677 tonnes of chemicals were collected by the program's end in 2002. Although most of the chemicals

have now been destroyed, destruction of organochlorine pesticides has been costly and slow because there is only one specialised facility in Australia licensed to destroy them. Some of the other chemicals cannot be destroyed in Australia because there are no commercially available technologies that can handle them and they may need to be exported for destruction overseas. Since ChemCollect ended, industry has taken up the role of collecting and disposing of unwanted farm chemicals through its program ChemClear. The cost to industry and farmers of disposing of these chemicals will be ongoing, with industry now expecting to outlay around \$500000 each year to run the program. These programs illustrate that disposal of unused chemicals is a cost to industry and the community, underscoring the importance of addressing disposal issues at the beginning of the process as part of the chemical's life-cycle assessment.

- Chemicals used in products can cause problems when those products are treated, recycled or disposed. Examples are the heavy metals and brominated flame retardants used in electronic equipment that can be released into the environment through incinerator ash or leachate from landfill if not properly handled. This issue is now being addressed through product stewardship programs around the world such as the European Union's Restriction of Hazardous Substances Directive.

Our experience shows that chemical impacts have tended to have long-term effects and are often only fully felt and understood in the decades after the chemicals are used and released to the environment. Past contamination from activities carried out over the last 100 years or more has left legacies that carry expensive clean-up bills that are being paid for by industry, government and the community today. These economic legacies illustrate the importance of comprehensive assessment methods that cover the full life-cycle impacts of chemicals' production and use, in particular the impact and intractable nature of some long-lived breakdown products of some chemicals. They also illustrate that past practices and management controls for those chemicals were not adequate to prevent expensive long-term impacts. A national approach to better environmental management of chemicals offers the potential for significant benefits in avoiding these impacts occurring in the first place and the costly price tag of clean-up and remediation.

The issues that are emerging, such as endocrine disruptors, persistence and bioaccumulation of toxic chemicals and the range of chemicals being found in human blood, are complex and need to be carefully managed. Learning from past experience, we know that sound and effective upfront environmental chemicals management systems are needed to prevent future legacies occurring.

Internationally

Chemical issues are soundly on the agenda of governments and chemicals regulators around the world. The United Nations Environment Program is driving a new international agreement that sets future directions for managing the environmental and human health risks from chemicals. The Strategic Approach to International Chemicals Management (SAICM), is the new key overarching policy document for chemical matters to 2020, and demonstrates the priority being given throughout the world to action on this important issue. Through this agreement, governments around the world aim for the use and production of chemicals in ways that minimise adverse effects to health and the environment.

The European Union is undertaking a major overhaul of its industrial chemicals management system and plans to introduce its new system REACH (**R**egistration, **E**valuation, and **A**uthorisation of **C**hemicals) in 2008. While the details of REACH and its costs and benefits are still being debated, given the international nature of the chemicals industry, REACH will have a significant influence on chemicals management approaches worldwide.

Canada, which is concerned about the large number of older chemicals in use that have never been assessed, is screening 23,000 chemicals on its list of existing chemicals and expects to conduct detailed assessments of the top 1,000 chemicals of most concern in the next few years. In the USA, action is being taken on key chemicals of concern, such as the perfluorinated compounds (such as

those used in Teflon products) and many individual states are closely watching developments in other countries. In the next few years they are looking to follow the European lead with more and better assessments and tighter controls over higher concern chemicals.

These international programs have developed substantial momentum. They will result in a rapid expansion of knowledge about chemical risks, and the pressure to act on that knowledge from international and local communities will grow. Such international action reinforces the need for Australia to be pro-actively engaged in the changing context in which chemicals are being managed around the world.

1.2 HOW ARE CHEMICALS MANAGED IN AUSTRALIA?

In Australia, chemicals are generally assessed and registered or listed under separate schemes according to their end use – industrial, agricultural/veterinary, therapeutic (pharmaceuticals and medicines) or food related. National assessment agencies have been established by the Australian Government to administer the separate national regulatory schemes:

- National Industrial Chemicals Notification and Assessment Scheme (NICNAS) – industrial chemicals
- Australian Pesticides and Veterinary Medicines Authority (APVMA) – agricultural and veterinary ('agvet') chemicals
- Therapeutic Goods Administration (TGA) – therapeutic goods
- Food Standards Australia and New Zealand (FSANZ) – food additives.

These agencies are responsible for the assessment of chemicals prior to their manufacture, importation and use in products in Australia. Due to the separation of powers under the Australian Constitution, the States and Territories are responsible for enforcing conditions of use set by assessment agencies once products are sold. These regulatory systems are explained in more detail in Appendix 1.

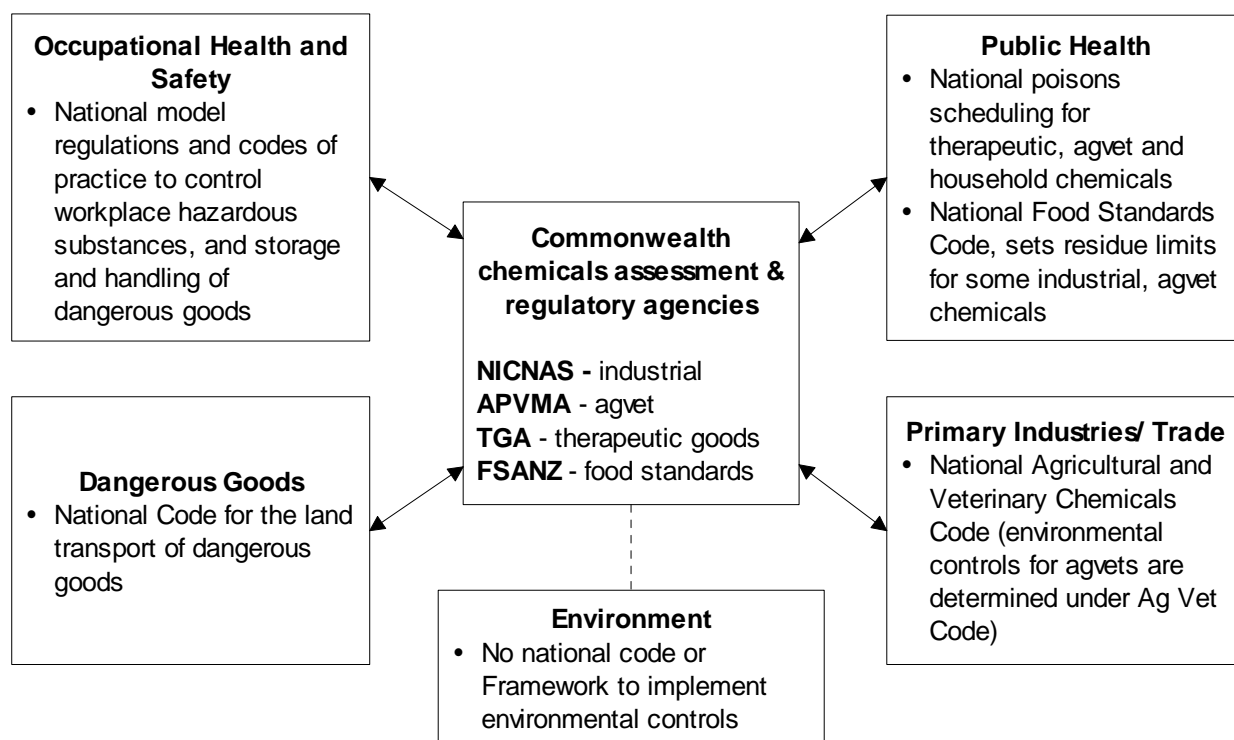
2 WHY IS NCHEM NEEDED?

2.1 EPHC NATIONAL CHEMICALS TASKFORCE (2003)

In 2002, Commonwealth, State and Territory Environment Ministers (EPHC), established the National Chemicals Taskforce to investigate chemical management frameworks in Australia and to scope the need for a national approach to ecologically sustainable chemicals management. EPHC initiated this investigation recognising that there were growing scientific and community concerns about the impact of chemicals on the environment and public health, the need to prevent harm from chemicals, and international trends towards more precautionary regulation of chemicals. The Taskforce had representatives from the Health, Primary Industries and Workplace Relations Ministerial Councils. It also consulted widely with industry, environment and other non-government groups, including holding two national stakeholder forums in August 2002 and February 2003.

The Taskforce found that there is no agreed national system that transparently and consistently covers the environmental risks that chemicals can pose. In contrast, the areas of public health, worker safety, dangerous goods transport and trade are well linked to assessment agencies and are all supported by nationally agreed systems (see Figure 1).

Figure 1: Existing national regulatory frameworks supporting chemicals assessments



The major concerns identified by the Taskforce, based on extensive feedback from stakeholders, included:

- The lack of a framework that clearly articulates the environmental issues to be considered in assessing and managing potential risks from exposure to chemicals and the kind of risk management outcomes to be achieved. This creates a cycle in which jurisdictions cannot respond rapidly and consistently to control chemicals of high environmental concern.
- The need for stronger links and continuity between national assessment schemes, jurisdictional management and regulation, and actual usage of chemicals.
- The need for better information to confirm that implementation and enforcement efforts flowing from chemical assessments are consistently providing the expected outcomes across States and Territories.
- The need for a consistent national approach to the regulation of environmental impacts from high-risk chemicals so that industry is provided with consistency, simplicity and certainty.
- Weaknesses in public information systems that lead to limited understanding of and limited public discussion about environmental chemical risks and the best ways to manage them.

The Taskforce reported to Environment Ministers in March 2003. It concluded that the existing chemical regulatory schemes were complex and that the absence of an environmental risk management framework for chemicals was a critical gap in the existing regulatory regimes for managing chemicals in Australia. More information about the National Chemicals Taskforce, including a copy of its report to Ministers and a summary of stakeholder consultations and concerns, can be found on the EPHC website.

<http://www.ephc.gov.au/pdf/EPHC/chemicalsmgt_scoping.pdf>.

Environment Ministers accepted the Taskforce's recommendations and agreed to develop a national environmental risk management framework for chemicals to assist making progress towards achieving best practice in chemicals management in Australia. This framework would aim to:

- improve policy and legislative frameworks, streamline and bring a more transparent, nationally consistent approach to environmental chemicals management
- improve and increase transparency on how environmental assessments are done, improve how chemical risks are managed, and how priority issues are identified and dealt with
- feedback information on chemical use issues to assessment agencies and improve understanding about chemical impacts in the Australian environment
- increase public participation in decision-making and provide better information and education on chemicals and the environment.

In 2003, the EPHC set up the National Chemicals Working Group, with representatives from Commonwealth, State and Territory environment agencies, to develop a draft environmental framework (see Appendix 2 – EPHC Chemicals Working Group Terms of Reference).

2.2 EPHC FOCUSING ON THE GREATEST GAINS

Although the arrangements for managing chemicals in Australia are complex, in large part the four pillars of chemical management (NICNAS - industrial chemicals, APVMA - pesticides and veterinary medicines, Food Standards Australia New Zealand – food additives, Therapeutic Goods Administration – pharmaceuticals) have operated effectively in delivering against existing nationally agreed frameworks for worker safety, human health, trade and dangerous goods.

The National Chemicals Taskforce found, however, that there are a number of areas where the management of the **environmental** impacts of chemicals within existing chemicals management schemes could be improved. EPHC has identified that the most effective way to make improvements is to focus on where significant gains could be made to the current systems in the near future and to review other areas at a later stage.

With this in mind, the EPHC is focussing on improving environmental and health outcomes (where environmental exposure leads to health impacts) for **industrial chemicals** as a priority, through the management system administered by NICNAS.

Management of industrial chemicals is the focus because:

- There is not a well developed or streamlined system for dealing with the environmental impacts of industrial chemicals, yet the potential for adverse impacts from industrial chemicals can be high due to their widespread use across a vast range of products and processes.
- Most of these chemicals have never been subject to modern assessments as they were introduced by industry prior to NICNAS being established in 1990 (there are some 40,000 industrial chemicals available for use in Australia, of which around 38,000 have never been assessed), and no system has been established to systematically identify and assess the most harmful of these old chemicals.
- There are industrial chemicals in use around the world that are now being regarded as high risk, and Australia needs to be able to take action if risks are demonstrated to be unacceptable. Currently, NICNAS does not have a full suite of powers to take appropriate action on high-risk chemicals (such as ordering a ban or phase-out if necessary).
- Industry has identified the need to streamline the complex regulatory regime that businesses must navigate to introduce, manufacture or use new chemicals in Australia, and COAG has identified the area of chemicals and plastics as a regulatory ‘hot-spot’ where the regulatory burden on business needs to be reduced. Industry has demonstrated a successful track record of working in partnership with NICNAS to deliver reforms to the industrial chemicals system (most recently for chemicals of low regulatory concern), and it has indicated that it would welcome the opportunity to work on further streamlining reforms.

Addressing these key issues is the major focus of the NChEM reforms set out in section 3. NICNAS released its discussion paper in April 2006 outlining reforms it is proposing to its Existing Chemicals Program. A good opportunity currently exists for EPHC to achieve improvements for industrial chemicals management by working in co-operation with NICNAS while it undertakes its own review.

In addition, the EPHC has identified some refinements to the system for managing **agricultural and veterinary chemicals so that better environmental outcomes can be achieved**. Although there is a well developed regulatory system for these chemicals, the potential for environmental harm can also be high. Some targeted refinements can be made to reduce and better manage these risks, including:

- clarifying and updating the national assessment procedures and methodologies for environmental assessments of agvet chemicals;
- dealing more effectively with life cycle impacts of agvet chemical products, including disposal of products, impacts of non-active ingredients, impacts associated with product volatility (eg vapour drift and odour) and assessment of articles treated with agvet chemicals and their disposal (eg treated timber);
- improving the ability to require data and information post registration, where it is needed to address assessment information gaps or investigate emerging concerns; and
- improving feedback from environment, and other state regulatory agencies, chemical users and the public to the APVMA on adverse experiences and impacts from agvet chemical use.

In seeking reforms to these areas EPHC recognises that the Health and Primary Industries portfolios have prime responsibility for the industrial and agvet chemicals management systems respectively. In addition, the Worker Safety portfolios have responsibility for implementing the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), a United Nations sponsored program to bring consistency in the classification and labelling of chemicals worldwide. EPHC is working closely with the Ministerial Councils for those portfolio areas to achieve compatibility with these systems and common goals for improving the way environmental outcomes can be delivered. By liaising closely with other Ministerial Councils, EPHC aims to develop and promote an integrated and whole of government approach to these issues.

Other areas of possible reform to chemicals management not covered under NChEM may be taken up by EPHC at a later stage through the EPHC Chemicals Working Group. The Working Group intends to work with the TGA and FSANZ in future to determine the extent of environmental impact from therapeutic and food chemicals and, if a need is demonstrated, to develop best practice approaches to considering environment issues in assessment and management of those chemicals.

3 WHAT IS NChEM?

3.1 BEST PRACTICE PRINCIPLES FOR ENVIRONMENTAL CHEMICALS MANAGEMENT

The NChEM proposals aim to augment the current chemicals management systems in Australia by implementing best practice principles in environmental chemicals management. NChEM is designed to support the principles set out below.

Comprehensive Environmental Chemicals Assessment

1. Environmental chemicals assessments utilise a risk-based approach that includes consideration of:
 - the full life-cycle of the chemical with recommendations designed to prevent or minimise potential impacts that present at each stage of the chemical's life including manufacture, processing, transport, storage, use, recovery and disposal; and
 - broad classes of chemicals with similar functional characteristics, including whether there is any need for recommendations to be implemented across a class of chemicals.

2. Recommendations for risk management controls, particularly for high-risk chemicals, are appropriate to reduce or eliminate the environmental or environmental health impacts of the chemical identified by any assessment and can be implemented.
3. Chemicals are re-assessed in light of new scientific information and information generated by compliance, monitoring, or impact reporting programs.

Decision-making by National Chemicals Regulators

4. National chemicals regulators are clearly responsible for transparent decisions about the manufacture, import, availability and use of chemicals within Australia, based on their assessment of chemical risks. This includes the ability to set conditions of use and to restrict or prohibit the manufacture, import/export and use of particular chemicals.
5. National chemicals regulators provide clear and enforceable directions to the States and Territories to minimise or prevent unacceptable chemical impacts in their jurisdictions.

Implementation and Enforcement by States and Territories

6. States and Territories agree to abide by decisions of national chemicals regulators in relation to availability, supply and use of chemicals in Australia and are able to implement controls accordingly (e.g. in relation to the manufacture, processing, use, transport, storage, handling and/or disposal of chemicals).

Capacity and Consistency in the Management System

7. A system that ensures there is national consistency in the actions taken by jurisdictions in response to national chemical assessments, to achieve high levels of environmental and human health protection, within the broader goal of achieving ecologically sustainable development.
8. A management system that has the capacity for rapid response to control chemicals of high environmental and human health concern.

Effective Regulation and Risk Management

9. A wide range of regulatory and management controls (including economic and incentive measures, and non-regulatory controls) are available to reduce or eliminate chemical impacts in a cost effective manner.
10. The controls chosen to reduce chemical impacts on the environment and human health (whether regulatory or non-regulatory) must be workable, practical and appropriate for addressing the risks presented by that chemical.
11. Substitution of chemicals of concern with safer substances and/or alternative production processes and methods is considered where possible as part of the risk management decision-making.

Feeding Back Information

12. Monitoring and review mechanisms are in place to provide feedback about compliance and achievement of environmental outcomes of chemical management decisions, and to inform future decisions.
13. There is a flow of information from national chemicals regulators to the States and Territories about how to implement decisions.
14. There is a flow of information from the States and Territories to the national chemicals regulators providing feedback on how decisions have been implemented and the effectiveness of the management controls.
15. Based on this information, national chemicals regulators assess the effectiveness of steps taken and the need for a possible review and revision of measures if adverse impacts are occurring.

Informing and Engaging the Public

16. The public has easy access to information about chemical impacts and how they are being managed by government agencies.
17. Opportunities are provided to the public (including industry, users, environment groups, all levels of government and the broader community) to participate in decisions that address how to deal with chemical impacts on human health and the environment.

3.2 NChEM AT A GLANCE

Goal

The goal of NChEM is to ensure the **ecologically sustainable management of chemicals**.

Principles

The key principles underpinning NChEM are to have and promote:

1. transparent, open, effective and consistent decision making on chemicals management
2. responsive and evolving chemicals management systems, in recognition of the constant emergence of new information on chemicals and as new approaches to chemicals management develop
3. international best practice in environmental risk assessment, incorporating assessment of the full range of environmental impacts throughout a chemical's life-cycle
4. nationally consistent management and regulation of chemicals by jurisdictions
5. active and informed chemical priority setting processes and risk management decision making, with participation from the general community, environment groups, chemical users and industry
6. regular flow of information on chemicals and feedback on chemical impacts into chemicals management systems that is integral and essential for effective and responsive chemicals management.

Scope

NChEM is about the **environment** and focuses on how to improve environmental outcomes within current systems of chemicals management. In the first instance NChEM proposals are directed to the **industrial chemicals system**. There are some additional refinements also proposed for the agvet system. This will allow the NChEM proposals to be 'tested' and refined before any potential broader application to the other chemical assessment systems.

Key Action Areas

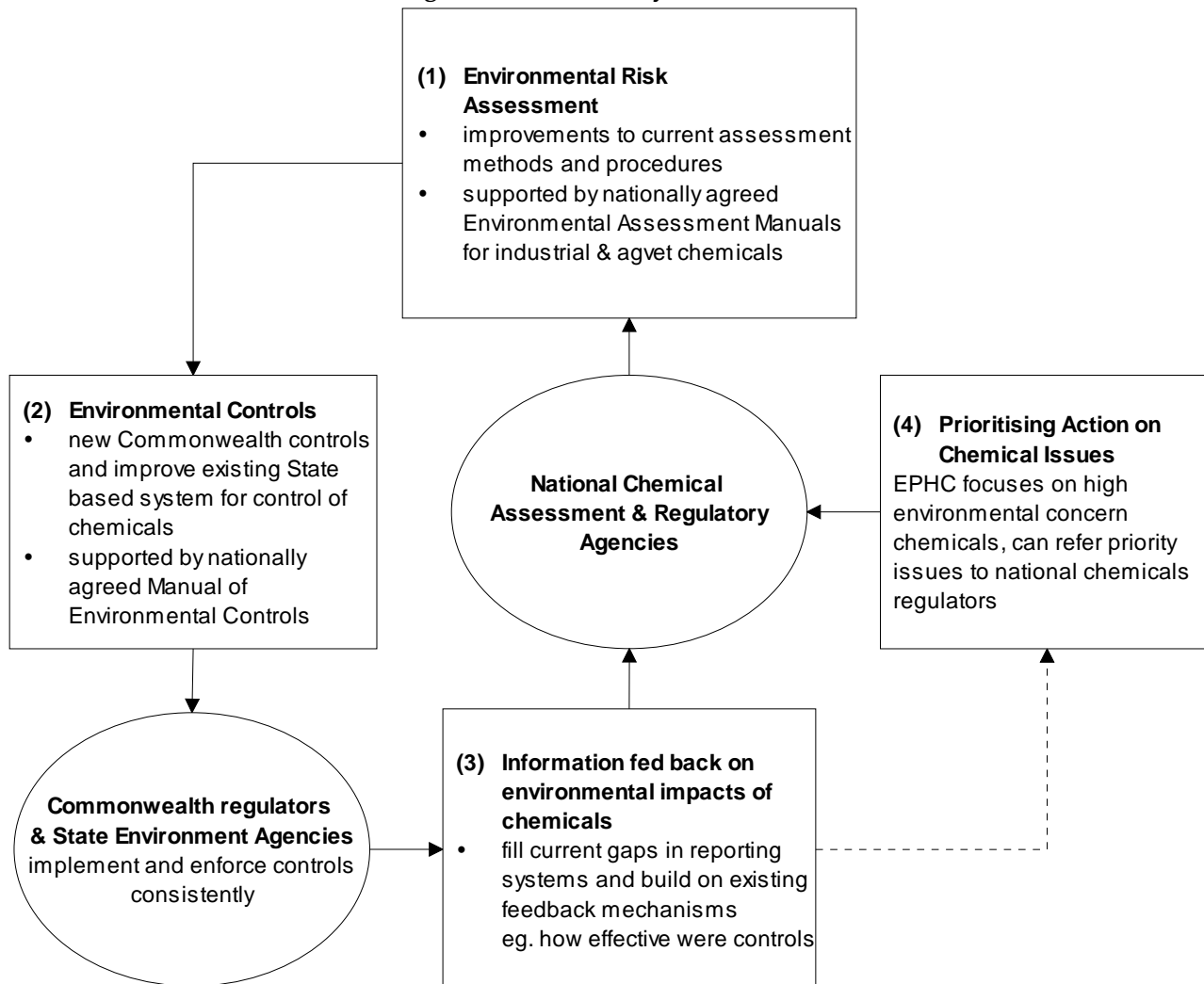
The principles will be implemented through four key action areas. These are:

1. **Strengthening Environmental Risk Assessment** – better consideration of environmental impacts in national chemical assessments.
2. **Streamlining Environmental Controls** – nationally agreed actions to control risks to the environment from chemicals of high concern across all States and Territories.
3. **Informing Decisions** – improving the capture of chemical use, exposure and impact information so that it is used effectively to inform decision-making on chemicals.
4. **Prioritising Action** – strategic consideration of priority and emerging chemical issues affecting the environment.

These action areas are to be supported by strengthened consultative mechanisms between national chemicals regulators and the Australian Government environment agency and State and Territory environmental agencies, and by providing better opportunities for public participation in decision-

making on chemicals. For more information on these consultative mechanisms see sections 3.3 and 3.6. The interaction between these action areas is illustrated in the diagram below, and each action is discussed in detail in the following sections.

Figure 2: NChEM Key Action Areas



3.3 KEY ACTION AREA 1 - ENVIRONMENTAL RISK ASSESSMENT

3.3.1 Problem

The first step in managing chemicals is assessing the risks to human health and the environment. Environmental risk assessments of chemicals are undertaken by the Australian Government Department of the Environment and Heritage (DEH) in accordance with international standards. However, there is no nationally agreed guidance that sets out the methodologies that are used and makes these available to stakeholders (such as the States and Territories, industry, users and the public).

In addition, State and Territory environment agencies are not closely involved with assessment processes and do not have fully effective arrangements for liaison with the national chemical regulators. Currently, for new and existing chemical assessments, the environmental assessors do not have clear authority to consult with their jurisdictional counterparts on the scope, content or draft risk management recommendations. This lack of cross-jurisdictional communication has led to a concern that 'on the ground' environmental issues may not be adequately captured and addressed in the assessment process and decision-making of the national chemicals regulators, and that risk mitigation measures may be difficult to implement or may not be enforceable.

3.3.2 Objectives

There are four objectives for the Environmental Assessment component of NChEM, to:

1. provide a public blueprint for environmental **risk assessments**, incorporating international best practice such as new OECD developments
2. deliver consistency, simplicity and transparency for industry and the public in environmental risk assessment of chemicals
3. ensure there are adequate mechanisms for State and Territory environment agencies to provide advice on chemical risks to the chemicals assessors and/or regulators at key steps in the risk assessment and mitigation process, so that assessments and decisions fully capture environmental concerns and are informed by 'on the ground' experience
4. improve some key aspects of the environmental assessment of agvet chemicals.

3.3.3 Proposed Solutions

1. Objectives 1 and 2 would be met by providing environmental risk assessors, jurisdictions, industry and the public with reference guidance documents detailing the general approach to undertaking environmental risk assessments.
2. Enhancing environmental input into environmental risk assessments would be achieved by:
 - (i) for industrial chemicals, the national chemicals regulator:
 - better alerting State and Territory environment agencies of an environmental assessment of a new chemical which may be of high concern
 - obtaining information, where available, from State and Territory environment agencies (and others) on chemical use and exposure
 - consulting with State and Territory environment agencies on the scope of an assessment of an existing chemical
 - (ii) consulting with State and Territory environment agencies on draft risk management recommendations for new and existing chemicals of high concern, prior to draft reports being released for public comment.
3. Improving the consideration of environmental matters where they relate to chemicals management by:
 - (i) improving environment agency input into existing or new government fora established by NICNAS and APVMA
 - (ii) improving the capacity of the current system to consider broad chemical policy issues that relate to environmental risk assessments.
4. Strengthening the environmental assessment of agvet chemicals particularly in the areas of disposal; non-active ingredients and the volatility of product formulations; and articles treated with agvet chemicals (e.g. chemically treated wood).

3.3.4 Environmental Risk Assessment Manuals

The general approach to undertaking environmental risk assessments will be contained in two **Environmental Risk Assessment Manuals** that consolidate international best practice methodologies and approaches. One manual would cover assessment of industrial, therapeutic and food additive chemicals (initially only used for industrial chemicals) and a second manual would cover assessment of agvet chemicals. The manuals will be 'living documents' and subject to ongoing review and amendment to maintain their currency.

The manuals will serve two purposes - first, to provide guidance tools for chemical assessors, and second, to provide an information source for industry and the public on what is considered

throughout the course of a risk assessment. These manuals should provide greater transparency about the process by which chemicals are generally assessed for their environmental risks.

As the Assessment Manuals outline the agreed process by which assessments of potential environmental risks will be carried out by DEH, the majority of assessments will be able to be completed with little need for additional interaction from State and Territory environment agencies. In this way the environmental assessment process for the bulk of chemical assessments can be streamlined and timeliness maintained or improved.

3.3.5 Improving Environmental Input into Risk Assessments

State and Territory environment agencies do want to be involved in assessments for the limited number of higher concern chemicals where the agencies are likely to be required to implement controls (based on current experience likely to be between two and ten per year). To this end, environment agencies are proposing that they be alerted by NICNAS or DEH when a new chemical of high concern enters the system for assessment. This will ensure all appropriate information that States and Territories may have is available to DEH at the time of undertaking assessments and that DEH consults with State and Territory agencies about possible risk management controls that may be required. States would undertake to more effectively co-ordinate within their own jurisdictions.

In addition, it is proposed that NICNAS at an early stage, alert State and Territory agencies of assessments of higher concern existing chemicals, so that they have more input into the scope of assessments (i.e. the range of issues the assessment will cover), and that they are consulted on assessment outcomes and draft recommendations at an early stage of their development. This would also foster improved information flows from State and Territory environment agencies to NICNAS.

3.3.6 Strengthening Interaction with National Chemicals Regulators

It is proposed that Commonwealth, State and Territory governments sign memoranda of understanding or other instrument between environment agencies and NICNAS and the APVMA respectively. This is to ensure that there is improved engagement with environment agencies in existing or new Government consultative committees, and that environment agencies are closely consulted on assessments and reviews of chemicals of high environmental risk. These arrangements will need to ensure that this increased interaction does not compromise the timeliness of review decisions or the release of commercially sensitive information and supports co-ordinated liaison between chemical regulators and the Australian Government environment agency where it already exists.

NICNAS

EPHC has identified a need to strengthen interaction between State and Territory environment agencies and NICNAS. Currently, a NICNAS/State liaison group exists of workplace safety agencies. No State or Territory environment agency is represented on this group, and the DEH attends only as an observer. Environment agencies do not have effective engagement through this existing group and a suitable mechanism needs to be developed to enable regular liaison between the environment agencies and NICNAS on the full range of matters relating to environment protection.

The Chemicals Working Group has discussed this issue with NICNAS and is aware that NICNAS is considering how to strengthen ties with all State and Territory agencies involved in chemicals management (e.g. health and environment departments) as part of its own reform program. Increased environment agency interaction with NICNAS through either the existing liaison group or other forum would help to achieve some of the outcomes sought by EPHC. EPHC will continue to work with NICNAS to develop a suitable consultative mechanism for increasing environment agency input into the management of industrial chemicals.

APVMA

The APVMA consults regularly with the States and Territories on the operation of the national registration system for agvet chemicals through its Registration Liaison Committee (RLC), a forum that meets twice a year. All States and Territories are represented by their primary industry departments, the original signatories to the national agreement that established the APVMA. Only NSW and the ACT have environment agency representatives and Western Australia has a health agency representative, because these agencies have some direct regulatory responsibilities for agvet chemicals in those States and Territory. The Australian Government Departments of Environment and Heritage, Health and Ageing, and Agriculture, Fisheries and Forestry are also represented at RLC.

EPHC is aware that the APVMA has been considering the need for broader consultation with State and Territory environment and health agencies and has discussed the matter with RLC members. At this stage, a firm proposal has not been settled on by the APVMA. Increased environment agency linkages with the APVMA would significantly help achieve some of the outcomes sought under NChEM - improving environmental input into assessments and priorities for reviewing older chemicals, evaluating management approaches and control strategies for pesticides, and feeding back information on agvet chemical impacts. EPHC will work with the APVMA to find a suitable approach for increasing environment agency input into the management of agvet chemicals, whether via DEH or some other means.

3.3.7 Improving Assessments of Agricultural and Veterinary Chemical Products

The National Registration Scheme for Agvet Chemicals (contained within the national Agvet Code and State and Territory control of use legislation) already provides most of the elements needed for best practice management of the environmental impacts of agvet chemicals. Under the national Agvet scheme, there are clear and differentiated roles for both the Commonwealth assessment and registration authority (the APVMA) and the States and Territories, and these responsibilities have been progressively refined over the 10 years since the scheme was introduced. There is a range of ways that environmental impacts of agvet chemicals can be managed, and the APVMA continues to develop new approaches as issues arise, such as publishing guidance and developing new registration requirements in relation to spray drift risk. Nevertheless, EPHC has identified some areas where further work would assist in improving the scheme to more effectively manage the environmental impact of agvet chemicals. These are:

- Strengthen life cycle assessment of agvet chemicals, including disposal issues and assessment of articles treated with agvet chemicals (e.g. treated wood).
- Improved consideration of disposal issues in product registration approvals and on product labels.
- Consideration of improving directions on product labels where chemical and product assessments indicate there is a potential for human and environmental harm from non-active chemical ingredients.
- Consideration of the volatility of agvet products and their potential to cause off target impacts, for example through vapour drift and offensive odour, during the product assessment, registration and approval process.
- The potential for and effectiveness of registration approvals requiring registrants to provide post-registration information on relevant aspects of the use and/or impacts of high risk chemical products, as a condition of the registration (e.g. to implement a chemical assessment recommendation seeking information on environmental impacts post-use) - discussed further in 3.5 below.
- Potential increased use of non-regulatory tools by the APVMA, Australian Government and States and Territories to encourage industry to reduce reliance on harmful chemicals and promote integrated pest management and cleaner production approaches.

EPHC has discussed these proposals with the APVMA, and EPHC will be consulting with interested stakeholders on the proposals further in the coming months.

3.4 KEY ACTION AREA 2 – STREAMLINING ENVIRONMENTAL CONTROLS

3.4.1 Problem

Powers to manage and regulate risks that may be posed by industrial chemicals are fragmented across the Commonwealth, States and Territories, leading to confusion over the roles and responsibilities of governments. Links between national chemical assessment schemes and environmental control by States and Territories for industrial chemicals are weak, making it difficult to ensure chemicals are used in line with assessment recommendations and that environmental management of chemicals is nationally consistent.

Nationally consistent environmental outcomes for chemicals can be more easily achieved if the Australian Government, through its national assessment bodies, has prime responsibility for making decisions about the availability, supply and use of chemicals in Australia. State and Territories would be responsible for implementing and enforcing the decisions of national chemicals regulators in their jurisdictions (e.g. via their existing licensing or other environmental regulatory powers). This is currently how the systems work for agvet chemicals (under the Agricultural and Veterinary Chemicals Code), therapeutic goods (under the Therapeutic Goods Act 1989) and food additives (under the Food Standards Code), but is not the case for industrial chemicals.

3.4.2 Objectives

To ensure that:

1. in response to chemical assessments, that national chemicals regulators are clearly identified as the central bodies with adequate powers to manage chemical risks;
2. jurisdictions agree to deliver, supported by a national legislative framework, consistent environmental outcomes and work towards delivery of consistent management and regulation of high risk chemicals; and
3. there is improved consistency and streamlining for industry, and greater public confidence in the implementation of controls to manage the risks of chemicals.

3.4.3 Proposed Solution

Enhancing NICNAS' Role

NICNAS currently utilises a variety of powers and approaches with industry and the community to achieve safer chemical outcomes. NChEM proposes to build on the most effective of these and to apply them more broadly in the environmental context.

EPHC is proposing that the national industrial chemicals regulator, NICNAS, incorporate into its current role of assessment and notification of chemicals, the role of deciding which chemicals are allowed to be used in Australia and under what conditions they may be used.

It is proposed that NICNAS build on its current abilities by:

- augmenting the powers available to it to control the importation, manufacture, supply and use of chemicals,
- more clearly defining the roles and responsibilities of NICNAS and the States and Territories to manage and regulate chemicals,
- setting up feedback mechanisms to capture information about the effectiveness of environmental controls.

The proposed features of an improved environmental risk control model for industrial chemicals would be:

- NICNAS would make all decisions about the availability and conditions of use of industrial chemicals in Australia, based on environmental and health risk assessments.
- Management controls specified by NICNAS, and implemented by the Australian Government, States and Territories, would be appropriate to mitigate the environmental or environmental related health impacts posed by a chemical (identified through environmental and health risk assessments).
- NICNAS would have clear responsibilities, and amendments made to its legislation accordingly, where necessary, to enable it to directly:
 - control, suspend or prohibit manufacture, import/export, supply and handling of chemicals,
 - suspend, prohibit and phase out use of chemicals (and to remove chemicals from the Australian Inventory of Chemical Substances) without reference to an international treaty in the small number of cases where this may be warranted
 - better restrict the use of chemicals through setting conditions on use.
- States and Territories would enforce these requirements through State/Territory legislation.
- States and Territories would review their environmental chemicals legislation to ensure they were equipped with adequate powers to implement NICNAS decisions.
- NICNAS' chemical assessment decisions would specify the regulatory and management actions required to meet the level of environmental protection recommended by environmental chemical assessors in consultation with State and Territory environment agencies.
- NICNAS and State/Territory controls would be used in combination to ensure whole of life-cycle management of chemicals (e.g. a chemical phase-out could be implemented by a NICNAS prohibition on manufacture and import, complemented by State/Territory implementation of phase out requirements on existing users).
- States and Territories would remain primarily responsible for enforcing conditions on use (including prosecution of offences), management of stockpiles of prohibited or phased out chemicals, and disposal under clear guidance and direction from NICNAS.
- Effective consultation between NICNAS, the States and Territories, industry and the public would occur before chemical management decisions are made by NICNAS.
- Information feedback mechanisms would be established between the States, Territories, DEH and NICNAS to evaluate the effectiveness of chemical management controls.
- Where non-regulatory, voluntary tools would be appropriate to manage a chemical's impacts, States and Territories could select management actions in consultation with industry that are most suitable for the outcome.
- Greater use of non-regulatory tools could be developed and utilised by NICNAS, States and Territories to encourage industry to reduce reliance on harmful chemicals, and promote substitution with less harmful chemicals and cleaner production approaches.

Arrangements for these proposals would be underpinned by an agreement between NICNAS, State and Territory environment agencies (and supported by legislative amendments where necessary) that would cover how jurisdictions, industry, users and the public are to be consulted before final decisions are made by NICNAS, and how the decisions of NICNAS would be implemented and enforced by the States and Territories. The diagram in Appendix 3 illustrates the proposed process for setting environmental controls for industrial chemicals following an assessment, including consultation between NICNAS, State and Territory environment agencies, industry and the public.

Environment agencies would not require the level of consultation indicated in Appendix 3 for every chemical assessment, but **only for chemicals of high concern**, of which there are generally fewer than ten each year.

Manual of Environmental Controls

Underpinning this approach for industrial chemicals, would be a **Manual of Environmental Controls** that sets out the regulatory powers and management tools available to NICNAS, States and Territories to control the environmental impacts of industrial chemicals (see diagram in Appendix 4). Assessment agencies would refer to this manual when deciding the best action needed to mitigate a chemical's risk. The manual would also provide the States and Territories, industry and the public with useful information about the powers and controls that are available to manage chemicals and how they can be used.

Legislative Changes

If accepted by governments, these proposals are likely to involve legislative change at both the Australian Government and State/Territory levels. Changes to NICNAS powers would initially be needed to enable it to take direct regulatory action over the higher risk chemicals on a national basis, including banning of a chemical and setting time limits for the phase out of its use or restricting the use of a chemical.

States and Territories would also need to review their legislation to ensure they had adequate powers to implement NICNAS decisions in a nationally consistent manner.

3.5 KEY ACTION AREA 3 – INFORMATION FEEDBACK

3.5.1 Problem

Existing feedback mechanisms that facilitate the flow of information on chemical controls and impacts from jurisdictions, industry and community back to the national chemical regulators are limited. In particular, the chemicals regulators cannot request further information from manufacturers and users about how a chemical behaves in the environment once the chemical has been approved for use, unless a chemical is placed under formal review. This presents a gap in the information that is available to assessors to enable them to verify that the data provided and assumptions made in the original assessment of a chemical are supported by real experience with the chemical when it is used in products and processes.

Consequently, chemical assessment conclusions are rarely tested or confirmed against actual use patterns and experience, for example whether management controls for a chemical are consistently providing the expected outcomes across States and Territories. In addition, current impact reporting mechanisms for State and Territory agencies, industry and the public do not adequately capture all the impacts and concerns about chemicals. In the absence of informative feedback it is more difficult for the chemicals regulators to decide whether further assessment or amendment to controls is needed, or to identify new issues of concern.

There has been some action to address this issue. The APVMA now has an Adverse Experience Reporting Program (AERP) available for product registrants, chemical users and community members to report adverse experiences related to the use of pesticides and veterinary medicines. The APVMA's legislation also requires registrants to submit information if it shows that the use of the product may be likely to have an unintended effect that is harmful to the environment.

3.5.2 Objectives

1. National chemicals regulators are able to obtain any necessary information about chemicals in use, to inform decisions about the management of chemicals.

2. Information capture and feedback mechanisms are developed and utilised effectively by chemical regulators.

3.5.3 Proposed Solution

Improved mechanisms for capturing and feeding back information on chemical impacts are integrated into both the industrial and agvet chemicals regulatory systems. This would occur in three ways:

1. A process for States and Territories to feed back information to chemicals regulators on the effectiveness of controls used to manage a chemical, following an assessment of a new chemical or an existing chemical review.
2. In cases where there are doubts that the chemical is being used as directed, or where new information has come to light following approval/assessment that requires investigation (e.g. as a result of feedback from States on the effectiveness of controls), then chemical regulators would be able to require a person or company that manufactures, imports or uses a chemical to provide information (e.g. on the volumes used in specific areas, regions or crops, volumes released in specific areas, concentrations in environmental media, application techniques, etc.). Information regarding use would ensure assessments can be tested and refined based on actual industry or user practices, rather than assumptions about patterns of use. (Note the national regulators currently have some powers to require post-assessment information.)
3. Chemicals regulators to have information capture systems that allow the public, industry, users and other government agencies to easily provide information on impacts and concerns about chemicals and be confident that the information will be considered as part of the management of those chemicals. The APVMA has taken a major step forward in this regard, operating the AERP, but the program could be refined to increase its effectiveness.

Information feedback by Industry

Currently new chemicals are assessed on data provided by industry based on laboratory tests and field trials. Based on this data, assumptions are made by assessors about how these chemicals will behave in the environment once they are used in products. It follows that these tests under controlled conditions can never provide a full understanding about how a chemical may behave or impact on the environment once it is in broad scale use in products and processes. Our experience with some existing chemicals has shown that unexpected and undesirable impacts in the environment can occur, and information about these impacts is needed early before any significant problems develop. It may also be the case that assumed impacts do not in fact eventuate, making ongoing management actions unnecessary. Requiring industry to conduct environmental monitoring in certain limited, specified circumstances could assist to ensure that control measures 'fit' the actual problem.

It is proposed that both the APVMA and NICNAS consider whether better use could be made of their powers to obtain information from industry about chemicals in current use, as part of their suite of regulatory powers. The chemicals regulators would only require this information and monitoring in a small number of cases (where the potential risks to the environment from the chemical could be high) in response to an assessment recommendation that specific monitoring (e.g. water sampling, tracking of use locations and volumes) be carried out to verify the accuracy of test data and assessment assumptions.

Information feedback by Government

Currently no uniform process exists for State and Territory environment agencies to evaluate the performance of the environmental controls applied in their jurisdictions and report to NICNAS or APVMA on their effectiveness (though this does occur on an ad hoc basis in some cases). It is proposed that environment agencies agree to provide this information to the chemicals regulators

where requested to do so. Where a chemical assessment specifically recommends evaluation of controls because of limited data or some concern about impacts that are hard to measure, NICNAS and APVMA could request environment agencies to provide that feedback for that chemical. Environment agencies could also recommend modification of any controls as part of their response, and NICNAS and APVMA would consider these recommendations in consultation with the States and Territories.

EPHC acknowledges the value of the APVMA's AERP but notes its effectiveness is limited by the extent to which States, Territories, industry, users and the public report impacts and adverse experiences. As part of NChEM, EPHC is seeking a commitment from States and Territories (from all government agencies with a role in agvet chemicals) to report any adverse impacts to the APVMA through this program. EPHC will also work with the APVMA to improve the effectiveness with which reports about adverse impacts trigger and feed into chemical assessments and reviews.

Information feedback by Community

At present, an impact reporting program (like the APVMA AERP program) does not exist for industrial chemicals, and there is no centralised, co-ordinated point for the stakeholders to report impacts or register complaints about chemicals. NICNAS receives and deals with ad hoc letters, submissions and requests from the public about industrial chemicals on a regular basis. NICNAS is currently considering ways to enhance its program for industrial chemicals to make it easier for the public to provide information on chemical impacts, and that would also define the responses and action that could be taken with chemicals when this information is received. Such a program would need to be clearly defined and effective, and would be developed in further consultation with stakeholders.

3.6 KEY ACTION AREA 4 - PRIORITY AND EMERGING CHEMICAL ISSUES

3.6.1 Problem

Over time scientific research, both in Australia and overseas, has identified environmental problems with some chemicals, and the national chemicals regulators have responded to ameliorate the impacts of those chemicals. The worldwide ban on organochlorine pesticides, the withdrawal of tributyl tin as a marine anti-fouling agent, and the international phase out of ozone depleting substances are good examples of how this has occurred. Yet it is recognised that, except in the case of definite international action (that can take many years to occur after clear impacts are identified), Australia does not have a systematic approach for identifying environmental problems that may be emerging with chemicals. Identifying issues early is critical because it allows strategies to be developed that can avoid the build up of long-lived, widespread impacts and the costly clean-up this may entail. The key problems with current priority issues approaches identified by EPHC include:

- Priority chemical issues are identified and acted upon across jurisdictions in an ad hoc and inconsistent manner, and there is no national approach to identifying priority chemical issues of environmental concern
- The lack of a clear understanding of the extent to which and the manner in which the national chemicals regulators respond to international action on specific chemical issues
- There is a need for better environmental input into the current existing chemical review programs of the chemicals regulators.
- Current chemical review processes can be time consuming and there is limited ability to take interim, rapid action on industrial chemicals of environmental concern
- The National Chemicals Taskforce identified that the public can be disengaged or find it difficult to influence priority setting under current chemical management systems.

3.6.2 Objectives

To ensure environmental issues with chemicals are identified and captured early, to enable EPHC to be proactive in raising chemical issues of environmental concern and determining the best course of action, that the broader community is more engaged in determining environmental priorities for chemicals, and that there is a unified environmental voice that supports the existing chemical review assessment programs of the national chemicals regulators.

3.6.3 Proposed Solution

The model proposed under NChEM is a new national priority setting focus to identify chemical issues of environmental concern that:

- is informed by public and expert technical input
- keeps abreast of and filters new information on Australian and international data and research on chemicals
- prioritises issues based on transparent criteria
- uses the capacity of Environment Ministers to take direct action on chemical priorities or refer matters to the chemicals regulators or other bodies, where that is the best path forward.

This nationally co-ordinated priority setting process would re-focus resources currently devoted by jurisdictions to chemicals management and would help ensure that they are used more effectively and strategically. More importantly, such an approach has the capacity to save governments, industry and the broader community resources and time by identifying issues and actions at an early stage that may ultimately prevent expensive chemical legacies from occurring down the track.

Supporting national review programs

One of the key aims of this priority setting process will be to complement the existing chemical review programs of NICNAS and APVMA, by identifying and feeding any priority environmental concerns directly to these agencies. By feeding environmental priorities into national assessment processes in a unified, streamlined and consistent manner, environment portfolios can provide a clear direction to national chemicals regulators on environmental issues that until now has been lacking. A unified environmental voice will also give ecological and environmental/health issues a stronger profile with these regulators.

Initiating voluntary action with industry and community

An environmental priority setting process will strengthen the capacity for Environment Ministers to take action on issues that are within their capacity to do so (e.g. setting controls on the treatment or disposal of material containing a particular chemical of concern), or to initiate joint action with Health and other portfolios on issues that straddle those areas.

Industry has initiated a range of self-regulatory and co-regulatory programs that deliver significant benefits to the environment and the community, such as Responsible Care, Plascare, PACIA Carrier Accreditation Scheme, Scheme for Phosphorous Content and Labeling of Detergents, Agsafe, DrumMuster and ChemClear. Such schemes can complement government management action where they are effective and accountable and Ministers will be looking to build on these arrangements where this is possible.

Environment portfolios have the capacity to engage directly with industry and the community on chemical issues where they are likely to respond well to voluntary initiatives aimed at changing behaviour. Environment Ministers have used this approach recently to address the issue of plastic shopping bags given out by supermarkets to the community. EPHC could forge initiatives directly with community and industry stakeholders to voluntarily remove chemicals of concern from

consumer products and industrial processes, to develop safer alternatives or to develop product stewardship approaches.

Alternatively, EPHC could initiate voluntary national programs specifically with industry on, for example, improving chemical use, finding and using safer alternatives, and improving waste management practices for chemicals used in industrial processes. Voluntary programs in this area could follow similar models to that used for industry cleaner production programs implemented by many State and Territory environment agencies for a number of years.

Strengthening stakeholder involvement

This process would also facilitate greater community involvement in the priority setting of chemicals issues through a stakeholder consultation forum. The aim of such a forum would be to ensure that the public has an 'easy to access' opportunity to raise any concerns about chemicals, and receive feedback on how governments are prioritising and addressing those concerns. This public input can generate new priority issues or add weight to actions proposed for, or being undertaken on existing EPHC priorities. The involvement of both industry, users and community stakeholders through a forum held every one or two years, could generate ideas, innovations and co-operative strategies for more effectively dealing with chemical problems, potentially minimising the need for expensive, resource intensive regulations.

4 THE BENEFITS OF NChEM FOR CHEMICALS MANAGEMENT

Improving the ecologically sustainable use of chemicals in Australia will yield significant economic, social and environmental benefits. The costs and benefits of implementing NChEM need to be considered in evaluating the net benefit of proceeding with NChEM.

EPHC is preparing a detailed analysis of the social and economic benefits and impacts of the NChEM proposals that will be made available to the public. One of the aims of releasing this discussion paper is to seek information from industry, community and government on any issues the proposals may raise and the likely cost implications for each of these groups, including specific impacts on individuals, businesses and organisations.

EPHC is seeking your **comments** on the benefits and impacts of NChEM and any **information** on the likely costs and benefits of the proposals for your organisation, business or community. The value of this analysis of NChEM will, in part, be dependent on the level of detail of the information provided by industry, chemical users and the public on the likely benefits and costs. EPHC therefore encourages you to provide comprehensive information on how NChEM may impact on you or your business, organisation or community.

Any information provided to EPHC may be used in the social and economic analysis however names, addresses and any information that identifies the person, business or organisation providing the information will be kept confidential. If you want any other information you provide to be treated confidentially, you should contact the Australian Government Department of the Environment and Heritage (which will be leading the economic analysis) - contact details provided on page 35. To send EPHC any information see 'How to Have Your Say' in Section 7.

4.1 COMMUNITY AND INDIVIDUALS

An objective for the reforms articulated through NChEM is to increase community confidence in how chemicals are managed in Australia. This objective is underpinned by better public access to information on chemicals, better environmental outcomes being delivered for chemicals, improved community participation in chemical management processes, and more focussed controls for high risk chemicals.

The community already has improved access to information on chemicals through the information resources launched by EPHC over the last two years: the National Chemicals Information Gateway and the National Chemical Reference Guide (see 6.1 below). These resources will be supported in future by the Household Chemicals Education Program (see 6.2 below) that aims to educate householders on how to reduce chemical exposures and risks. In addition, the Manuals covering environmental assessment and controls (see 3.3 and 3.4 above), will be valuable public resources that provide greater transparency and improved understanding of how chemicals are assessed and managed in Australia.

The community can look forward to better environmental outcomes for both industrial and agvet chemicals through improved assessment regimes that meet international best practice standards and address impacts across the full life-cycle of the chemicals. In the case of industrial chemicals, this will be supported by better implementation of assessment recommendations through a more integrated, nationally consistent management approach that focuses on the high-risk chemicals. Chemicals of high environmental risk are likely to have more robust controls imposed on them, including possible phase out or restriction of some of the most harmful chemicals. As a result, industry will have an incentive to invest in finding alternative less harmful substances and processes, yielding benefits of lower environmental and health risks for the community. Improved resourcing by Governments of chemicals compliance, monitoring, and information feedback to assessment agencies will help to close the loop and improve the integrity of the chemicals management systems, including their ability to respond rapidly to new and emerging issues of environmental concern.

The community's participation in decision making processes on chemicals will be enhanced by the stakeholder forum (see 3.6 above) set up to obtain better input of the community's views and increase its influence in setting chemical priorities for the environment. The community's involvement in such processes will also help to increase transparency and generate confidence in decision making on chemicals. While such involvement is clearly beneficial, members of the community will need to be mindful that the need to prioritise chemical assessments and management activities on the basis of risk and available resources means that not all issues of concern to them may be addressed in a timeframe they may desire.

Participation will also be improved through mechanisms that assist the community to provide information on chemical impacts. Members of the public can use the APVMA's AERP to report any adverse experiences (whether related to health, environment, or effectiveness of agvet products) online at <http://www.apvma.gov.au/qa/aerp_ag_vet>. EPHC will continue to promote this program through its communication on NChEM.

Subject to a proposed scoping study NICNAS has stated in its discussion paper, *Promoting safer chemical use: towards better regulation of chemicals in Australia*, its intention to develop a nationally co-ordinated system for industrial chemicals that would enable the public to provide information on any impacts from industrial chemicals used in products and processes. EPHC will continue to work with NICNAS on the scoping and development of such a program.

Together, these features of NChEM should engender more confidence that the chemical management controls determined by national bodies and implemented by regulators will achieve a high level of protection of the Australian environment, and consequently better protection for the Australian community.

4.2 INDUSTRY

The reforms articulated through NChEM are also intended to benefit industry through streamlining and reduced fragmentation of environmental chemicals regulation across Australia, as well as the improved integration of national chemical assessments with State and Territory management

approaches. This will decrease complexity and improve consistency in chemicals regulation, and reduce the regulatory burden on business in line with the current COAG agenda, leading to significant economic benefits for industry. Differences in chemical controls applied by States and Territories should diminish, creating a more consistent regulatory environment across the country. Industry will also benefit from a more transparent and predictable approach to identifying priority and emerging chemicals.

Industry should also enjoy benefits, from the increased community confidence in Australia's chemicals management systems (discussed above), which are likely to be generated as result of the NChEM reforms.

Industry may need to monitor or report on chemical impacts in some cases, as directed by national assessment bodies, noting that this would be limited to where there were significant concerns about use of a particular chemical, and monitoring is needed to maintain confidence and access to that chemical. While this may involve some initial cost, it will help avoid unnecessary restrictions on use of these chemicals. At present, decisions by the regulators to curtail the use of certain chemicals are sometimes criticised by industry and users as being based on experimental predictions that do not reflect conditions of real use in the environment. Field monitoring will provide realistic field-based evidence and ensure that decisions by the regulators are sound and more acceptable to industry.

4.3 GOVERNMENT

Greater interaction and co-operation between State and Territory environment agencies and national chemicals regulators will lead to improved environmental outcomes for chemicals and more efficient use of resources. NChEM should lead to greater upfront resourcing of chemicals management in each jurisdiction, which will enable more issues to be addressed early so that problems down the track are prevented and the need for costly, resource intensive 'clean-up' of chemical legacies is reduced over time.

Governments will also benefit from less regulatory fragmentation and more consistent regulatory controls applying across all jurisdictions. Streamlining and improved integration of environment agency knowledge in assessment and regulatory approaches for chemicals will minimise time and money spent implementing controls at the State and Territory level. Improved feedback mechanisms should see improved controls on chemicals and better environmental outcomes for less effort and agency resource expenditure than occurs at present. Better priority setting processes will enable the issues of concern to be dealt with more rapidly and effectively, and will provide a clear and agreed focus for resource attention.

Governments may incur some costs associated with the implementation of any new controls for chemicals and any adjustments needed to existing management systems at the State and Territory level (including any changes to legislation and policy). Costs may also be associated with advising industry and the community about any new regulatory controls and how to comply with them. In addition, resources will be needed for jurisdictions to provide ongoing support to NChEM. Agencies will quantify these likely additional costs through the economic analysis process and these costs will be included in the implementation package presented to Ministers and Governments.

5 IMPLEMENTING NChEM

This section sets out how the elements of NChEM could be implemented, and how the various roles and responsibilities would be shared across government.

5.1 INTER-GOVERNMENTAL AGREEMENT ON MANAGING CHEMICALS IN THE ENVIRONMENT

One mechanism to implement NChEM would be through an inter-governmental agreement on managing chemicals in the environment. The parties to the agreement would be the Australian

Government, and each of the States and Territories. An inter-governmental agreement would ensure that there is whole of government support for NChEM across all of the key portfolio areas including Health, Primary Industries, and Worker Safety. EPHC will consult with and seek agreement from the Ministerial Councils on Health, Primary Industries and Workplace Relations to this approach.

The best practice elements of NChEM would be included in the agreement and it would also cover the key roles and responsibilities of the parties, including the ongoing role of Environment Ministers and their agencies, and the responsibilities of the Australian Government, States and Territories to implement NChEM. These are covered below.

5.2 ENVIRONMENT PROTECTION AND HERITAGE COUNCIL - CHEMICAL CO-ORDINATION COMMITTEE

EPHC would have an ongoing role and prime responsibility for implementing the agreement and reporting to COAG on progress. Major policy questions and implementation issues would also be referred to EPHC for resolution. A senior level committee of officials (replacing the current Chemicals Working Group) would oversee the implementation process and monitor the effectiveness of NChEM (as well as take over the work program of the current Chemicals Working Group).

The functions of the committee could include:

- developing an implementation plan with key milestones and monitoring the effectiveness of NChEM, reporting to EPHC on progress and recommending any modifications
- establishing a national priority setting mechanism, to identify and consider emerging and priority chemical issues of environmental concern, including facilitating stakeholder input into the priority issues process
- co-ordinating policy advice to EPHC on chemicals and the environment, and promoting whole of government approaches to managing chemicals and resolving issues
- overseeing the steps taken by jurisdictions to review their environmental chemicals legislation, and actively work towards nationally consistent environmental risk management controls for chemicals
- referring environmental chemical matters to other Ministerial councils and/or Australian Government assessment and regulatory agencies, where appropriate
- developing recommendations, policies, principles and guidelines to continually improve the ecologically sustainable management of chemicals.

It is proposed that the committee would be made up of representatives from each of the Australian Government, State and Territory environment agencies and be chaired by DEH, and DEH would provide a secretariat to support the work required. The committee could invite key organisations in chemicals management (e.g. NICNAS or APVMA) to attend meetings. The committee would seek technical advice and other input from time to time and it is envisaged that it would set up advisory groups, as needed, to obtain this advice. This might include a technical/scientific group to review technical information on chemicals and update technical guidance materials such as the planned Environmental Risk Assessment Manuals. A technical group could also provide advice on developing the criteria for prioritising chemical issues for EPHC action.

5.3 AUSTRALIAN GOVERNMENT, STATE & TERRITORY LEGISLATIVE POWERS

Australian Government chemicals assessment agencies (DEH, NICNAS and APVMA), and the State and Territory environment agencies would carry the major effort of implementing NChEM. Legislative review and changes will be necessary to ensure NICNAS has the legislative powers to improve environmental outcomes sought in chemical risk assessments, to better control and manage chemicals and ensure good information feedback on the impacts of chemicals in use.

States and Territories currently have a range of powers to deal with environmental impacts of chemicals under environmental and pollution control legislation. In the absence of a national environmental framework, most States and Territories do not have dedicated environmental chemicals legislation and they would need to review to what extent their current legislation is adequate or whether new powers are needed. This could be done at a jurisdictional level.

NChEM has been designed to minimise the need for additional resources. However, jurisdictions may need to devote some new resources to chemicals management to implement the reforms. The most efficient approach to implement the NChEM reforms will be to focus State and Territory attention on the higher concern chemicals. Most chemicals can be assessed and managed routinely, and tools developed by EPHC such as the planned Environmental Risk Assessment Manual, should ensure that most chemicals could be managed without increased State and Territory involvement. For those small number of higher concern chemicals it is expected that jurisdictions will more actively input into the chemical assessment process, contribute to determining the appropriate level of regulation and management, and devote 'on the ground' resources and staff where necessary to ensure that chemical controls are adhered to by chemical users.

It is also proposed that State and Territory environment agencies participate more in liaising with NICNAS and APVMA. A key gap being addressed by NChEM is the need for State and Territory environment agency interaction on an ongoing basis in the chemicals assessment schemes. By linking more closely with national regulators consideration of environmental and environmental health issues should be significantly improved, leading to more effective and efficient environmental management of chemicals.

5.4 INDUSTRY, USERS AND THE PUBLIC

Members of the community and industry will also have an important role to play in assisting to implement the priority setting process discussed in 3.6 above. The stakeholder forum will need the contribution of industry and community to bring forward chemicals issues of concern and to help to forge possible solutions to some of these issues to recommend to Environment Ministers.

6 WHAT HAVE WE DONE SO FAR?

NChEM represents a major step forward for the environment. It is likely that Governments will consider the NChEM proposals, and your views on them, in 2007, and if agreed to, full implementation would take place in the following 12-18 months.

In the interim, EPHC is addressing some of the shorter-term needs identified by the National Chemicals Taskforce.

6.1 PUBLIC INFORMATION RESOURCES

The Taskforce found that public information on the use, movement, storage, release and the human health and environmental impacts of chemicals was not available on a comprehensive, national basis in Australia. Limited availability and/or access to both easily understandable and technical information make it difficult for members of the public to engage effectively in chemicals management at a local level. While the public is increasingly aware of the need to be careful about chemical use, there is a need for easily understood information that allows the public to make informed choices about reducing chemical exposures and risks.

To address these needs, over the past two years EPHC has developed and launched two internet-based publicly accessible resources:

- **Chemicals Information Gateway** is a website that makes it easy to access a wide range of information about chemicals on the internet. It is organised into key subject headings to make it easier to find information on particular aspects of chemicals. It is maintained by the Australian

Government Department of the Environment and Heritage on its website at <www.deh.gov.au/chemicals-gateway>.

- **National Chemical Reference Guide** is another web site that brings together all environmental standards and guidelines in Australia for over 600 chemicals in a central 'one-stop shop'. It is of great value for anyone seeking technical information about chemical properties and guidance information on environmental values for chemicals. It is also maintained by the Australian Government Department of the Environment and Heritage on its website at <www.deh.gov.au/chemicals-guide>.

6.2 HOUSEHOLD CHEMICALS EDUCATION PROGRAM

Another key information need identified by the Taskforce was that there is still a need for more detailed easily understood information that empowers members of the public to make choices to reduce chemical exposures and risks, particularly with household chemicals. In response, EPHC is working in partnership with other stakeholders to develop a household chemicals education program. The program is currently being developed in NSW by the Total Environment Centre in partnership with the Environmental Trust and the Department of Environment and Conservation, and will be made available to the other States and Territories.

The program covers the three main areas of household chemicals use:

- Everyday chemicals used in products inside and outside the home
- Pesticides used in home gardening
- Chemicals used by 'do it yourself' renovators.

The aim of the program is to educate householders and give them easy access to information about chemicals they normally come across in these situations, how to minimise risks and reduce exposure to their families and themselves.

7 HOW TO HAVE YOUR SAY

EPHC would like to hear from you about any general issues or comments you have with its NChEM proposals. Specific feedback is also sought on:

- a) the proposals for reform under the four key action areas (1: strengthening environmental risk assessment, 2: streamlining environmental controls, 3: informing decisions, 4: prioritising action); and
- b) any information you may be able to provide on any benefits or impacts you can see for your organisation, business or community.

To make your comments or obtain further information please write to:

Ms Monina Gilbey
Project Officer
EPHC Chemicals Working Group
C/- NEPC Service Corporation
Level 5 81 Flinders Street
ADELAIDE SA 5000

or by email to mgilbey@ephc.gov.au

The closing date for submissions is **Friday, 29 September 2006**.

All submissions are public documents unless clearly marked “confidential” and may be made available to other interested parties, subject to Freedom of Information Act provisions.

To allow ease of photocopying, hard copy submissions should be unbound. Electronic submissions should preferably be provided in Microsoft Word format and emailed to mgilbey@ephc.gov.au. Should you wish to provide your comments in another format, submissions may be made on a 3.5 inch floppy disk or CD Rom.

If you wish to speak to someone about NChEM please telephone your State or Territory contact listed below.

Contact	Telephone	Email
Australian Government		
Mr Lee Eeles	(02) 6274 1427	Lee.Eeles@deh.gov.au
New South Wales		
Ms Liz Moore/ Dr Jane Mallen-Cooper	(02) 9995 5903	Liz.Moore@environment.nsw.gov.au Jane.MallenCooper@environment.nsw.gov.au
Victoria		
Ms Christina Hill	(03) 9695 2559	Christina.Hill@epa.vic.gov.au
Queensland		
Dr Faiz Khan	(07) 3227 7349	faiz.khan@epa.qld.gov.au
South Australia		
Mr Peter Dolan	(08) 8204 2018	peter.dolan@state.sa.gov.au
Western Australia		
Mr Philip Hine	(08) 9222 8306	philip.hine@environment.wa.gov.au
Tasmania		
Mr Mark Stanborough	(03) 6233 6290	Mark.Stanborough@dpiwe.tas.gov.au
Australian Capital Territory		
Mr David Power	(02) 6207 5311	david.power@act.gov.au
Northern Territory		
Mr Michael Lawton	(08) 8924 4031	Michael.Lawton@nt.gov.au

APPENDIX 1: THE FOUR PILLARS, AUSTRALIA'S CHEMICALS MANAGEMENT SYSTEMS

Industrial chemicals

Industrial chemicals, such as dyes, solvents, cosmetics, adhesives, plastics, laboratory chemicals, and paints, are assessed by the National Industrial Chemicals Notification and Assessment Scheme (known as NICNAS) that sits within the Commonwealth Health portfolio. Chemicals permitted for use in Australia by NICNAS are listed (or 'notified') on the Australian Inventory of Chemical Substances (AICS), and it is illegal to manufacture, import or use a chemical that is not listed on the AICS. The scheme assesses and notifies individual chemicals, not the products that those chemicals may be found in.

There are around 38,000 chemicals that were available for use in Australia at the time NICNAS was established in 1990. All these existing chemicals were 'grandfathered', that is they were automatically listed on the AICS in 1990 without being assessed. Any new industrial chemicals introduced since that time (around 2,000 chemicals) must be assessed for their health, safety and environmental risks by NICNAS before they can be manufactured in, or imported into, Australia. NICNAS has assessed a small number of the older existing chemicals through its Priority Existing Chemicals Program, either on its own initiative or in response to concerns raised by governments, industry and community about public health, occupational health and safety, or environmental effects.

NICNAS must publish its assessments, summarising the health, safety and environmental matters that were considered. It can restrict or prohibit a chemical to fulfil Australia's obligations under an international treaty (such as under the Stockholm Convention on Persistent Organic Pollutants).

During 2005, NICNAS began reviewing its Existing Chemicals Program. EPHC has been working closely with NICNAS during its review process to identify areas of common ground, and where outcomes sought by Environment Ministers can be integrated with potential reforms emanating from the NICNAS review. EPHC has consulted closely with NICNAS in developing the NChEM proposals and has refined the proposals in response to input from NICNAS.

Agricultural and Veterinary Chemicals

Agricultural chemicals or pesticides include insecticides, herbicides, fungicides, repellents, and baits. Veterinary chemical products include animal therapeutic products, allergenic substances, medicated blocks and licks, and enzymes for animals. Assessment and registration of agvet chemicals is critical because many are designed to be released directly into the environment.

A national scheme to assess and register agvet chemicals and agvet chemical products was established in 1994 by Primary Industry Ministers when the Australian Pesticides and Veterinary Medicines Authority or APVMA was set up. All new agvet chemicals and agvet products must be assessed for health, safety, environmental and trade risks and registered by the APVMA before they can be sold, supplied, distributed or used in Australia. All existing agvet chemicals and products in 1994 had previously been registered under individual state registration systems that preceded the national scheme. The national scheme regulates agvet chemicals and products up to and including the point of sale, after which their use is governed by State and Territory 'control of use' legislation. The existence of the national scheme has led towards a gradual harmonisation of State and Territory legislation. States and territories enforce the conditions of use of agvet chemical products (on product registration approvals and product labels) that include environmental controls, and provide feedback to the APVMA on the effectiveness of these controls and any issues that arise with the operation of the national registration scheme.

Registered agvet products are entered on the National Chemical Register Information System and there now are in excess of 7,000 products registered in Australia. The APVMA also has an Existing Chemicals Review program and reviews registered chemicals and products in response to new information. It also manages quality assurance programs that monitor the ongoing safety and performance of registered products.

Therapeutic Goods

'Therapeutic goods' or pharmaceuticals include medicines and medical devices for use in connection with preventing, diagnosing, curing or alleviating a disease, ailment, defect or injury in humans. The Therapeutic Goods Administration (TGA), operating within the Commonwealth Health portfolio, assesses and registers therapeutic goods (including substances and devices).

Assessment involves an evaluation of the risk that the product poses to human health only. Factors such as the strength of the product, side effects, the potential harm through prolonged use, toxicity and the seriousness of the medical condition for which the product is intended are considered in assessment. Products considered to have a higher level of risk to human health, such as prescription drugs, are further assessed for their quality, safety and efficacy. Products considered to have a lower level, such as non-prescription drugs, are further assessed for quality and safety. Following assessment, products are entered onto the Australian Register of Therapeutic Goods (ARTG) before they can be supplied in Australia. There is evidence that some chemicals used in therapeutic goods can be released to the environment and cause undesirable impacts when they are disposed, for example through effluent from sewage treatment plants.

Food Additives

Food additives are substances not normally consumed as food and not normally used as food ingredients, but which are intentionally added to food to achieve technical functions such as enhancing colour or flavour, preserving, stabilising or emulsifying food. The use of food additives is controlled by Food Standards Australia New Zealand (FSANZ) under the Australia New Zealand Food Standards Code that operates within the Commonwealth Health portfolio. FSANZ ensures public health protection from food sold, processed, produced or exported from Australia and New Zealand. It also establishes standards that deal with the composition, residue limits, testing, packaging, storage and labeling of food. FSANZ assesses the human health risk of food additives before they are allowed to be used.

**APPENDIX 2:
EPHC CHEMICALS WORKING GROUP TERMS OF REFERENCE**

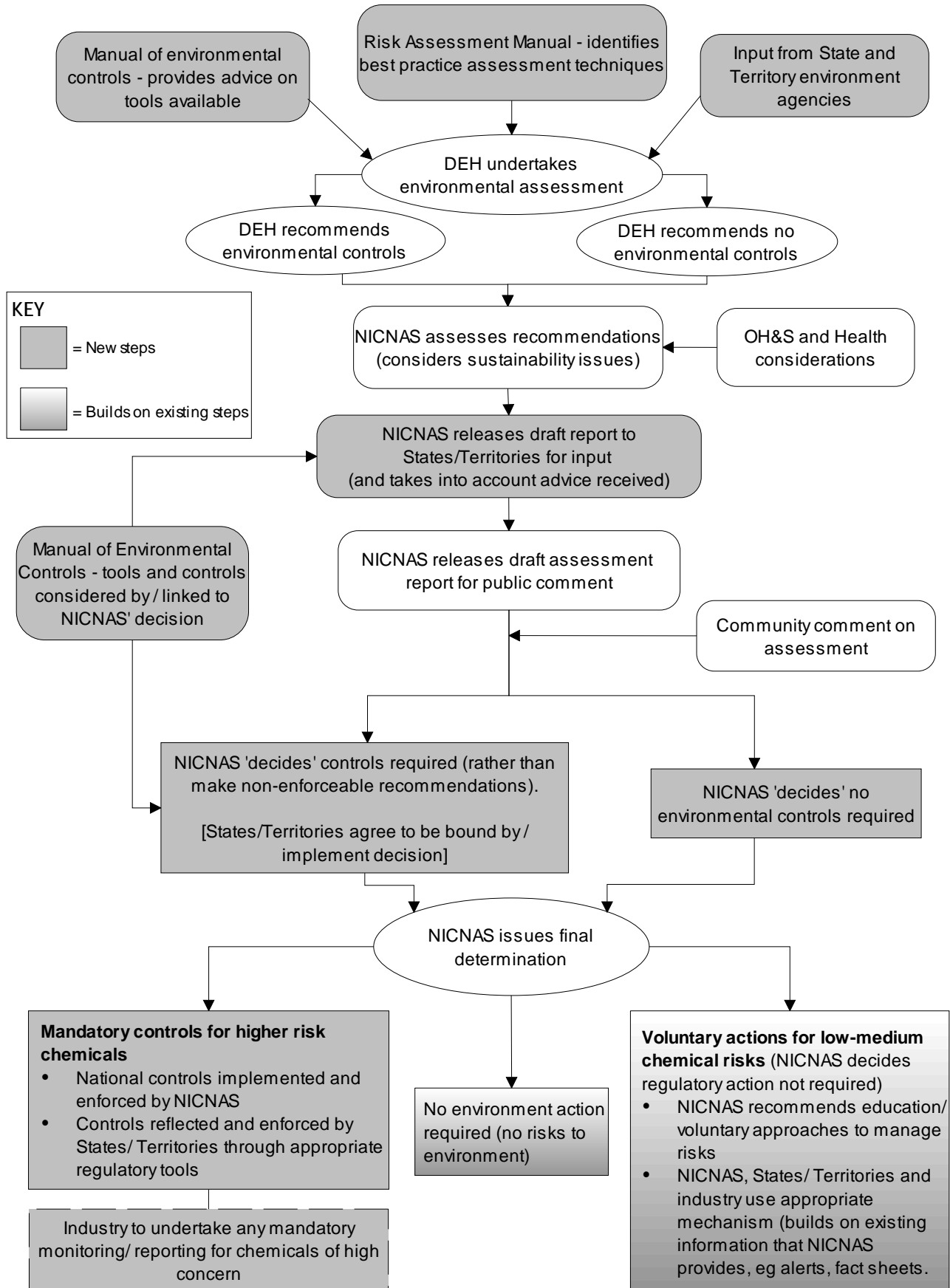
Terms of Reference

Having regard to the issues identified in the National Chemicals Taskforce Scoping Paper, the Working Group on the Environmental Risk Management of Chemicals is required to:

1. as a priority, develop a proposal for a national environmental risk management framework for chemicals that provides for the safe and ecologically sustainable use of chemicals and complements the existing national frameworks addressing chemical risks from the public health, transport, work safety, food safety and trade perspectives;
2. further investigate, scope and report on options to address:
 - a. mechanisms to establish and maintain a national environmental information system incorporating currently available information and additional information where gaps are identified (eg NPI, agvet use database, adverse effects registers);
 - b. mechanisms to develop national environmental benchmarks and standards that enable the outcomes of chemical management strategies to be assessed, and facilitate co-ordinated jurisdictional reporting of outcomes;
 - c. mechanisms for optimal cross-sectoral consultation to provide advice to Council on priority national issues and concerns in chemical management;
 - d. the need for and potential cost efficiencies from co-ordinated public education and information campaigns on chemicals, especially household chemicals;
 - e. a national program to fill gaps in investigating adverse chemical impacts on the Australian environment.
3. In addressing the above Terms of Reference, the Working Group is required to:
 - a. consider the costs of establishing and maintaining the required mechanisms and available resourcing options including:
 - the potential to utilise existing mechanisms on a shared funding basis with other portfolios; and
 - opportunities to source external funding; and
 - b. consult broadly with relevant government agencies, industry and the community;
4. report back to Council at its next meeting, including a work plan, budget and advice about priorities in addressing the issues identified in 2 above.

**APPENDIX 3:
PROPOSED PROCESS FOR SETTING RISK MANAGEMENT AND REGULATORY
CONTROLS FOR INDUSTRIAL CHEMICALS**

(refer to page 24)



**APPENDIX 4:
PROPOSALS FOR ENHANCED NICNAS POWERS, COMPLEMENTARY STATE
POWERS AND MANUAL OF ENVIRONMENTAL CONTROLS**

(refer to page 24)

