Australian Government

IChEMS
Industrial Chemicals Environmental Management Standard

December 2021

Australia's industrial chemicals roadmap:

Better environmental management of chemicals

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Chemicals and our environment

Chemicals are part of everyday life and play an important role in our broader economy. More than 40,000 industrial chemicals are available for use in Australia.

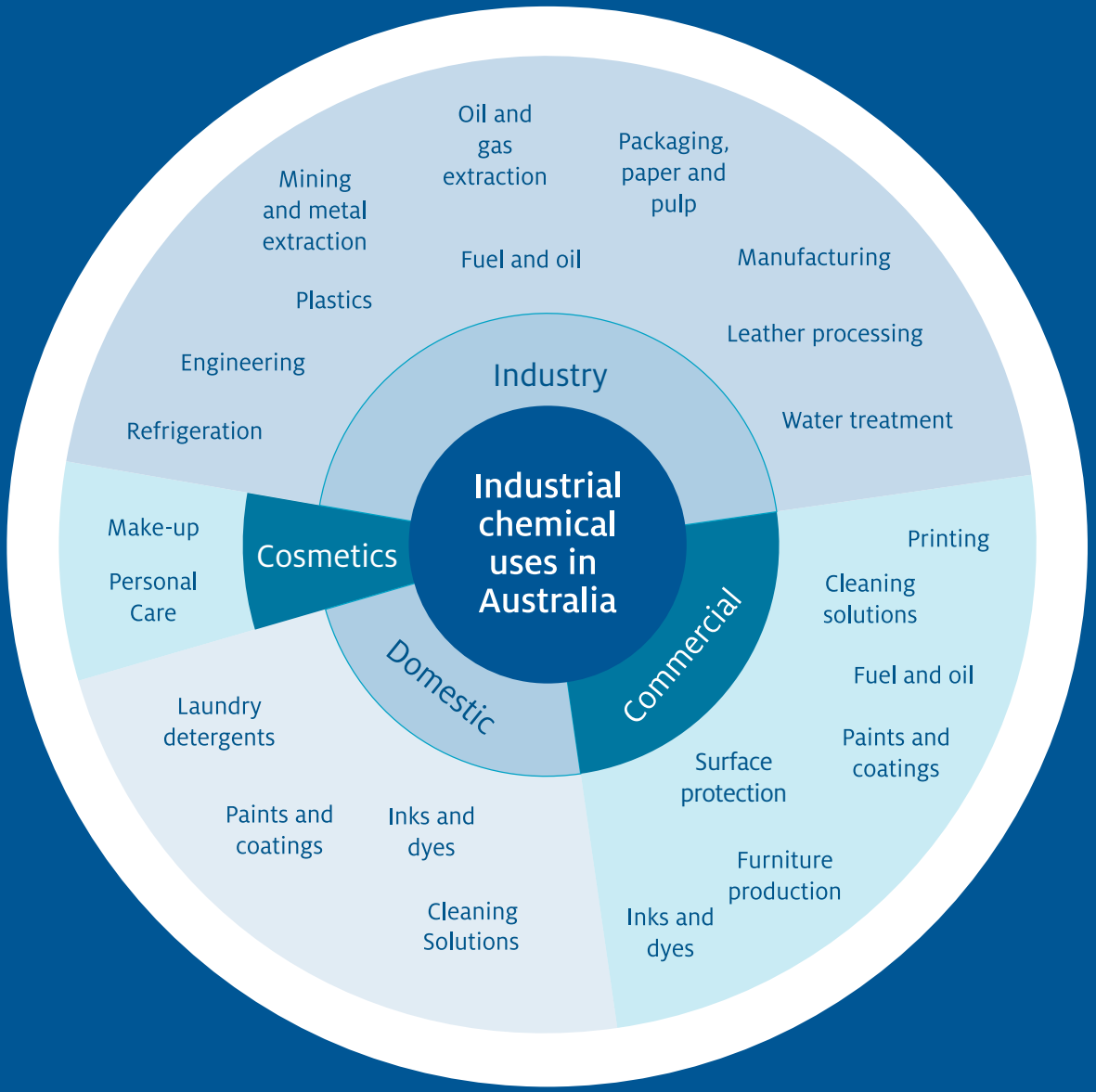
Industrial chemicals are used every day and found in a wide range of products (Figure 1). Most chemicals in use are of low concern to the environment and human health.

However, a small but significant proportion of industrial chemicals can cause harm if they are not managed properly.

In some cases, chemicals of concern such as per- and poly-fluoroalkyl substances (PFAS), lead, mercury, dioxins and brominated flame retardants, can endanger ecosystems and affect human health.

To protect Australia's unique environment and species, it's important to understand where these chemicals come from and put controls in place to prevent harm to the environment.

Figure 1 Industrial chemical uses



Working together

National frameworks exist to consistently manage products used in food, human and veterinary medicines, and pesticides.

Until now there hasn't been a mechanism to consistently manage risks to the environment from industrial chemicals across all jurisdictions. This means uncertainty, duplication and increased costs for industry.

To address this gap, Commonwealth, state and territory governments are working together to strengthen the management of industrial chemicals.

National reforms

By improving approaches to how industrial chemicals are used, produced, imported and managed, we can significantly reduce costs to human health and the environment. These reforms will also increase the consistency of national regulation.

They will complement national work to increase recycling and improve resource recovery by reducing chemical contamination in waste streams.

The Industrial Chemicals Environmental Management Standard (IChEMS) is at the core of these reforms.

This roadmap introduces industry, non-government organisations and the public to IChEMS. It sets out actions governments are taking as part of a nationwide approach to managing industrial chemicals.

Our IChEMS vision

Protect the environment and human health from harmful industrial chemicals through collaboration, efficient and nationally consistent regulation, and stewardship throughout the industrial chemical lifecycle.

To realise this vision, Commonwealth, state and territory governments will focus their efforts on **4 strategic goals**:

Greater regulatory consistency

provide consistent, transparent, practical and enforceable standards to manage the environment.

Shared responsibility

support regulators and industry to fulfil their responsibilities to prevent environmental harm.

Increased awareness

improve availability of information to increase understanding of environmental and human health risks.

Global citizenship

align Australian frameworks with international standards to improve trade and contribute to global goals.

How IChEMS will work

Better management of industrial chemicals starts by improving knowledge about these chemicals and how to manage their risks.

In March 2021, the Australian Government passed legislation (the Industrial Chemicals Environmental Management (Register) Act 2021) to establish the IChEMS Register.

Managing risk

Industrial chemicals will be listed on the IChEMS Register in one of 7 schedules according to their environmental risk (Table 1).

Risk management measures may be specified. These are outcomes-based requirements that may:

- require actions
- impose an obligation
- prohibit or restrict certain activities
- apply for a specified period.

Table 1 IChEMS schedules

	Description	Controls
Schedule 1	Very low or no hazard to the environment	General responsibilities to protect the environment, no additional controls.
Schedule 2	Hazardous, low risk	Proportional controls and requirements.
Schedule 3	Hazardous, moderate risk	Proportional controls and requirements.
Schedule 4	Hazardous, higher risk e.g. bioavailable metals, bioaccumulative substances, and endocrine disruptors.	Proportional controls and requirements.
Schedule 5	Potentially significant and long-lasting impact e.g. chemicals that are likely to cause environmental harm, or that demonstrate a combination of persistence, bioaccumulation, and toxicity.	Proportional controls for assessed uses. Controls may be enforced through additional requirements, such as licences, permits or regulations.
Schedule 6	Significant risk of serious or irreversible harm to the environment as per Schedule 7, but: the chemical has an essential use, there are no viable alternatives, and there are no exceptional circumstances making Schedule 7 more appropriate.	Severe restriction, with rigorous standards for any remaining uses. Controls will be enforced through additional requirements, such as licences, permits or regulations.
Schedule 7	Significant risk and highly hazardous to the environment e.g. chemicals that are persistent, bioaccumulative and toxic, such as chemicals under the Stockholm Convention.	Prohibited from import, manufacture, and use.

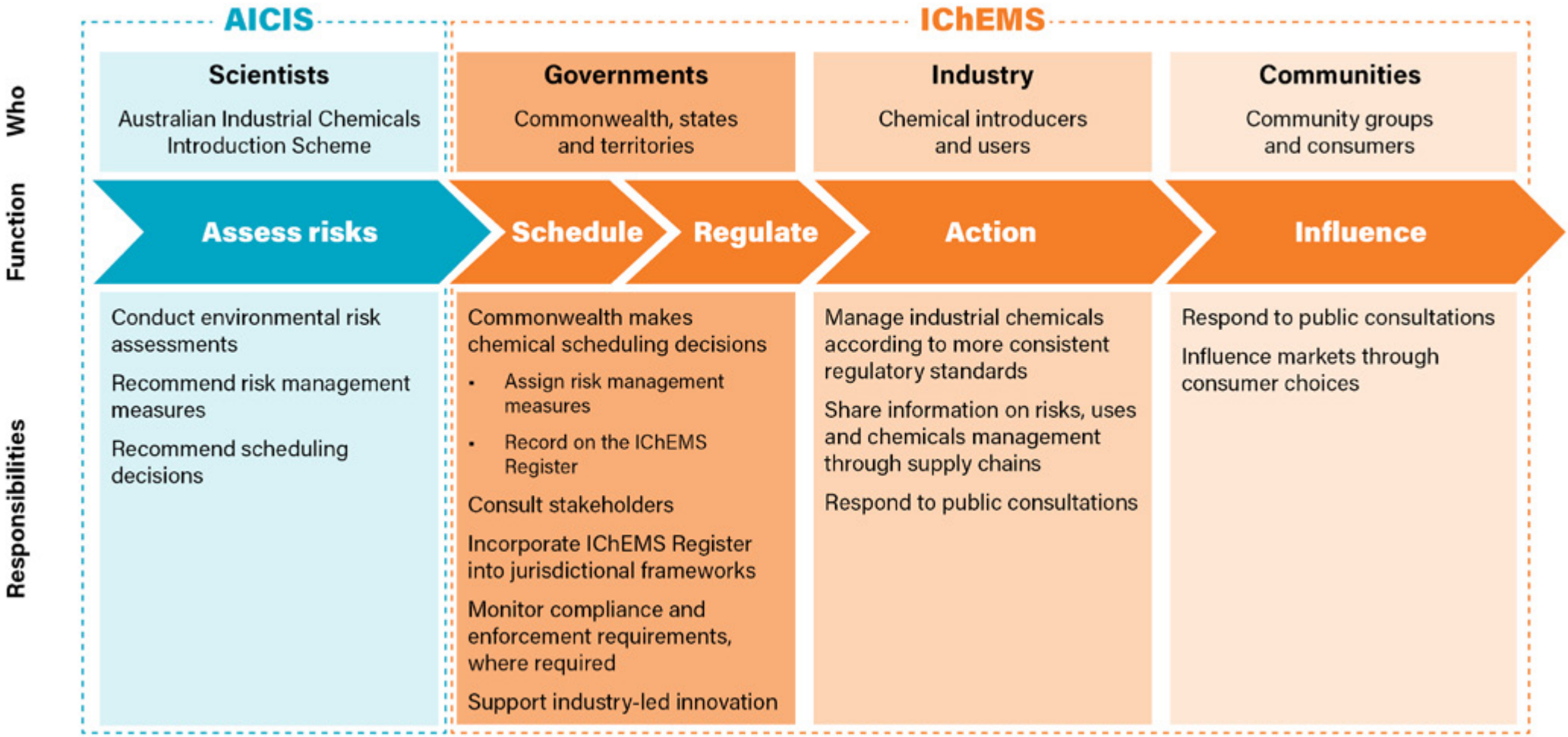
Uses of industrial chemicals that pose greater risks to people and our environment will have tighter controls. Commercial users, importers and manufacturers will be responsible for managing the introduction, use and disposal of industrial chemicals. Consumers don't have specific responsibilities under IChEMS.

IChEMS is designed to target those with the knowledge or systems to prevent and minimise industrial chemicals from causing environmental harm.

Shared responsibilities

Preventing environmental harm is a shared responsibility between scientists, governments, industry and communities.

Figure 2 IChEMS responsibilities



Scientists

IChEMS operates in conjunction with the Department of Health's Australian Industrial Chemicals Introduction Scheme (AICIS).

AICIS is responsible for:

- regulating the import and manufacture of industrial chemicals in Australia
- assessing risks to human health and the environment across the lifecycle of industrial chemicals.

IChEMS uses AICIS risk assessments to:

- schedule industrial chemicals on the IChEMS Register
- recommend actions needed to protect the environment from different end uses.

Governments

Responsibility for regulating industrial chemicals is shared between the Commonwealth, states and territories.

Governments are responsible for:

- establishing regulatory approaches
- monitoring and enforcing compliance
- evaluating the effectiveness of controls.

IChEMS is designed to operate in the context of existing environmental laws and systems as far as possible.

IChEMS complements existing frameworks that cover:

WORKPLACE SAFETY

CONSUMER SAFETY

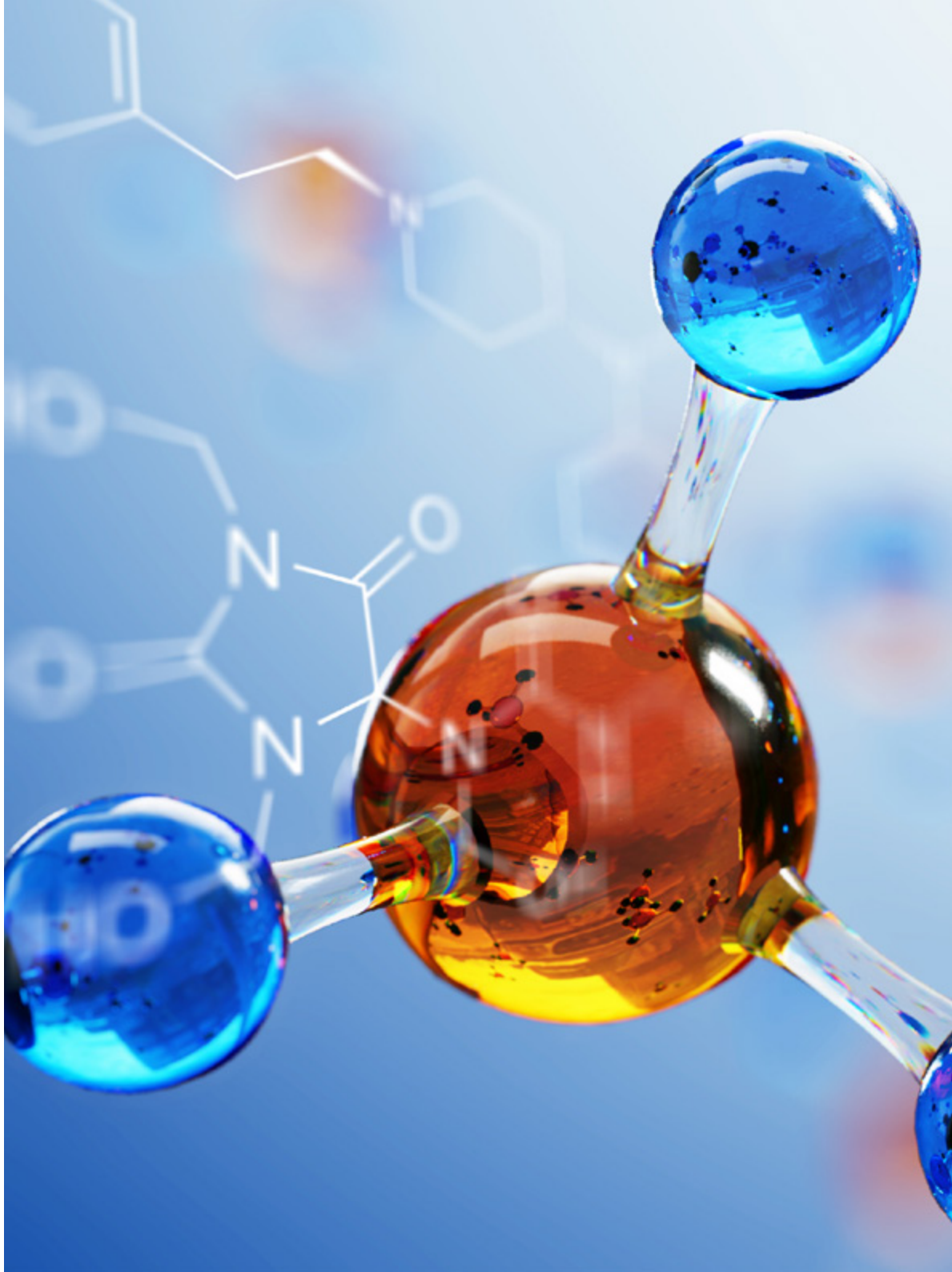
TRANSPORT

DANGEROUS GOODS

CHEMICAL SECURITY

Commonwealth, state and territory governments are working cooperatively to make IChEMS a cohesive national scheme.

Implementing IChEMS will enable Australia to meet internationally accepted standards for managing the highest concern industrial chemicals, including those listed in the Stockholm Convention.



Industry

Industry are the day-to-day managers of industrial chemicals.

Industry supports IChEMS by:

- being informed about the industrial chemicals they are managing
- incorporating environmental risk management practices into daily operations.

Businesses will usually have flexibility in how they meet risk management measures, except for restricted high-risk chemicals.

Regulators will give guidance on compliance expectations.

Businesses operating at different stages of a chemical's lifecycle may be responsible for:

- compliance with requirements for import, manufacture and export of industrial chemicals
- considering industrial chemical risks in the design of products
- identifying appropriate mechanisms for handling and disposing of industrial chemicals
- providing information on risk management requirements and permitted uses to others
- preventing and reporting potential environmental harm.

Communities

Most Australians live in environments that are free from serious chemical contamination.

IChEMS supports preventative approaches for industrial chemicals of emerging concern.

This is key to safeguarding communities against future contamination.

IChEMS helps protect Australian communities:

- The public IChEMS Register will be an online resource with information on the environmental risks of different industrial chemicals and their uses.
- This knowledge gives consumers an opportunity to exercise their influence to drive the design and manufacture of products that use lower concern industrial chemicals.
- Consultation is a core element of IChEMS, and the public is encouraged to participate in public consultation.
- IChEMS will inform governments, industry and communities on how they can better protect humans and the environment from harmful industrial chemicals.

Implementation stages

Commonwealth, state and territory governments recognise cooperation and a firm commitment to IChEMS will better protect the environment and our communities from the risk of future harm.

Governments across Australia are working towards a more consistent national approach to regulating industrial chemicals, by adopting IChEMS into regulatory frameworks.

Further actions will include:

- improving education
- stewardship
- innovation
- partnerships.

Governments will consult with impacted stakeholders at each implementation stage:

EARLY 2022

MID 2022

From Mid 2022

Jurisdictions release plans for IChEMS implementation

LATE 2022

From Late 2022

Jurisdictions incorporate IChEMS Register into regulatory frameworks

From Early 2022

Commonwealth will start scheduling industrial chemicals

2023 ONWARD

2023 Onward

IChEMS vision and goals are realised

Government action

Commonwealth, state and territory governments will support the IChEMS vision and goals.

All governments have committed to the following initial actions to implement IChEMS:

- Create a public IChEMS Register of industrial chemicals, their level of environmental concern and appropriate management.
- Automatically adopt the IChEMS Register into relevant Commonwealth, state and territory regulations.
- Apply a minimum standard for environmental management of industrial chemicals, such as general responsibilities or duties to protect the environment.
- Build on existing frameworks to ensure risk-proportionate regulatory control of Schedule 5 and 6 industrial chemicals, such as through licences, permits or regulations.
- Promote national collaboration through the IChEMS Jurisdictional Board. The Board will also oversee performance of IChEMS.
- Prepare nationally consistent regulatory guidelines to help businesses comply with their obligations.
- Support industry to improve and harmonise information flow in supply chains.
- Encourage industry-led actions such as development of guidelines to promote better management of industrial chemicals.
- Prioritise compliance and enforcement effort based on risk.
- Prioritise scheduling of industrial chemicals to meet Australia's obligations under international conventions.

Case study

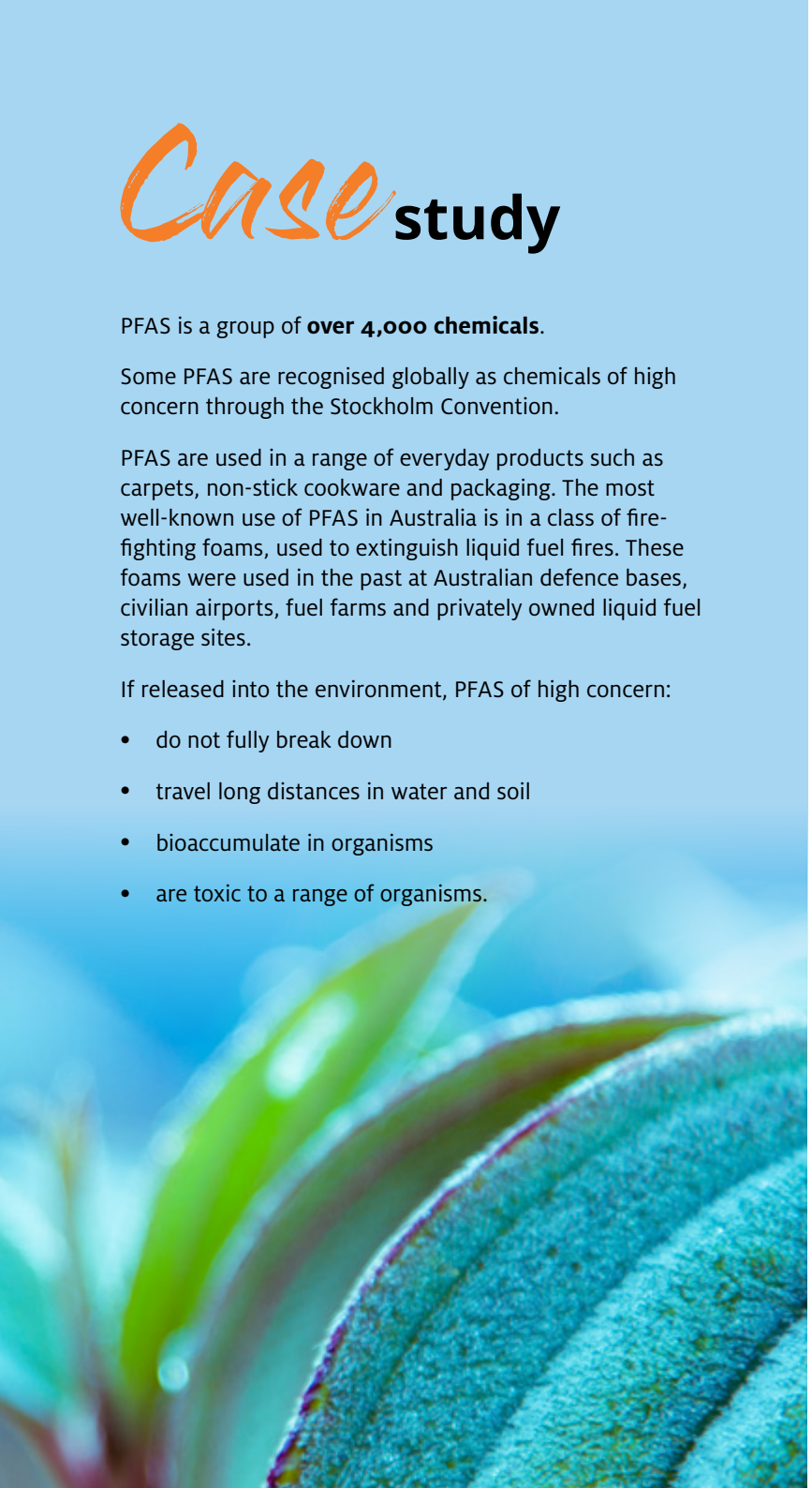
PFAS is a group of **over 4,000 chemicals**.

Some PFAS are recognised globally as chemicals of high concern through the Stockholm Convention.

PFAS are used in a range of everyday products such as carpets, non-stick cookware and packaging. The most well-known use of PFAS in Australia is in a class of fire-fighting foams, used to extinguish liquid fuel fires. These foams were used in the past at Australian defence bases, civilian airports, fuel farms and privately owned liquid fuel storage sites.

If released into the environment, PFAS of high concern:

- do not fully break down
- travel long distances in water and soil
- bioaccumulate in organisms
- are toxic to a range of organisms.



Managing PFAS without IChEMS

Risk assessment

The Australian Government has performed risk assessments that identify PFAS of concern to the environment.

Before IChEMS

Without a national framework to manage the environmental risks of PFAS, jurisdictions managed PFAS in different ways.

Implementation and compliance

Some states and territories have banned certain uses of PFAS, while some regulate PFAS. Other states have no PFAS-specific regulatory management controls.

Managing PFAS with IChEMS

Risk assessment

IChEMS will use existing and future risk assessments to schedule high priority PFAS.

After IChEMS adoption

Scheduling decisions will identify PFAS of highest to lowest concern.

Decisions will describe the controls required to manage environmental risks.

Industry consultation will help inform the decision-making process.

Implementation

Jurisdictions will use their own regulatory frameworks to implement scheduling decisions.

PFAS will be managed more consistently across Australia.

EPA TASMANIA

NSW EPA

EPA South Australia

NORTHERN TERRITORY GOVERNMENT

Queensland Government

ACT Government | Access Canberra.

Government of Western Australia
Department of Water and Environmental Regulation

VICTORIA State Government

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