



2026

New Zealand's Updated National Implementation Plan Under the Stockholm Convention on Persistent Organic Pollutants



Ministry for the
Environment
Manatū Mō Te Taiao



Te Kāwanatanga o Aotearoa
New Zealand Government

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Foreword

The Stockholm Convention on Persistent Organic Pollutants (the Convention) commits governments to protect human health and the environment by reducing and, where possible, eliminating the production and release of chemicals designated as persistent organic pollutants (POPs).

New Zealand was one of the original signatories and the Convention came into force in 2004. Since then, New Zealand has established and updated comprehensive laws and regulations to manage these chemicals, beginning with the initial 12 POPs and expanding to include all subsequent additions.

New Zealand's first National Implementation Plan (NIP) was published in 2006, followed by an Addendum in 2014 addressing endosulfan. The 2018 NIP update covered 13 additional POPs, and the 2022 NIP update addressed two POPs added in 2019: dicofol and perfluorooctanoic acid (PFOA), its salts, and related compounds. Legislative updates, including to the Hazardous Substances and New Organisms Act 1996 and the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004, have ensured all POPs listed in the Convention are controlled. The 2026 NIP update covers the addition of PFHxS, UV-328, Dechlorane Plus and methoxychlor.

Key government agencies, including the Ministry for the Environment, Ministry for Primary Industries, New Zealand Customs Service, and the Environmental Protection Authority, work together to enforce these regulations. Regular biomonitoring of New Zealanders' serum and breast milk, along with testing of food and the environment, help track POPs levels. Additional support includes services for people exposed to POPs, funding for chemical collection and site remediation, and legacy contamination management.

New Zealand has achieved significant progress, such as phasing out polychlorinated biphenyls (PCBs) by 2016, well ahead of the Convention's 2025 deadline, and reducing dioxin emissions through increased renewable energy use, improved emissions technology, and stricter air-quality standards. These measures have led to declining dioxin levels in mothers' milk and the wider population.

This updated plan documents the actions taken and outlines strategies for ongoing compliance and proactive management of POPs in New Zealand. While legacy issues persist, New Zealand remains committed to minimising the impacts of POPs on human health and the environment and continues to support international efforts under the Stockholm Convention.



Sam Buckle
Acting Secretary for the Environment

Executive summary

The Stockholm Convention on Persistent Organic Pollutants (the Convention) commits governments to take measures to protect human health and the environment from persistent organic pollutants (POPs).

Article 7 of the Convention requires each party to develop, implement and update a national implementation plan (NIP).

This update outlines New Zealand's current and planned activities to address its obligations under the Convention. This includes the POPs added to the Convention at the 10th and 11th Conferences of the Parties in 2022 and 2023 respectively.

Table 1 summarises New Zealand's approach to each Article under the Convention.

Table 1: National Implementation Plan 2026 summary of New Zealand measures

Article	Responsibility	Function – including measures
Article 3: Eliminate releases from the intentional production and use of persistent organic pollutants (POPs)	Environmental Protection Authority (EPA)	EPA administers the Hazardous Substances and New Organisms (HSNO) Act 1996 in matters relating to: <ul style="list-style-type: none"> prohibition on import, production, use, storage and disposal of POPs assessing new and existing chemicals that exhibit POP characteristics permitting the appropriate use of POPs for laboratory-scale research or as a reference standard.
	EPA and New Zealand Customs Service (Customs)	EPA and Customs: <ul style="list-style-type: none"> enforce the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004 control movements of POP chemicals and POP hazardous waste across the border.
Article 4: Register of specific exemptions	MfE	MfE will register specific exemptions, as appropriate.
Article 5: Action plan to reduce or eliminate releases of dioxins and other Annex C chemicals	MfE	To protect human health and the environment by continuing the minimisation and, where feasible, ultimate elimination of release of dioxins and other Annex C chemicals, MfE will continue to: <ul style="list-style-type: none"> review and update four yearly New Zealand Inventory of Dioxin Emissions to Air, Land and Water, and Reservoir Sources monitor laws and policies to manage releases of dioxins and other Annex C chemicals identify strategies to minimise releases of dioxins and other Annex C chemicals promote information (where appropriate) to support the above programmes report progress under the Action Plan for Dioxins and Other Annex C Chemicals every four years continue to implement the Action Plan for Dioxins and Other Annex C Chemicals to achieve release reduction or source elimination.

Article	Responsibility	Function – including measures
Article 6: Stockpiles and wastes	EPA and MfE	<p>To reduce or eliminate releases from stockpiles and wastes:</p> <p>EPA:</p> <ul style="list-style-type: none"> enforces any bans on POPs under the HSNO Act 1996 promotes the safe interim storage and disposal of POPs through the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 grants permits to export POPs or POP wastes for destruction under the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004. <p>MfE:</p> <ul style="list-style-type: none"> administers the Contaminated Sites and Vulnerable Landfills Fund to help local government and landowners assess and clean up contaminated sites throughout the country provides national direction through the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 and Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 administers the Waste Minimisation Act 2008, which provides funding for chemical (including POPs) recovery schemes through the Waste Minimisation Fund, and for product stewardship schemes.
Article 7: NIP	MfE	<p>MfE will:</p> <ul style="list-style-type: none"> review and update the NIP in accordance with the requirements of Article 7 submit New Zealand's updated NIP to the Secretariat of the Stockholm Convention (Convention Secretariat).
Article 8: Listing of new POPs under the Convention	EPA and MfE	<p>EPA and MfE will continue to:</p> <ul style="list-style-type: none"> monitor international assessments of potential POP chemicals and participate in forums, as appropriate; and, subject to resources, collect information about these POP candidates in New Zealand consult with stakeholders in developing a New Zealand position on chemicals recommended by the POPs Review Committee to the Conference of the Parties to the Convention for listing under the Convention.
Article 9: Information exchange	MfE	<p>MfE will continue to provide and exchange information with parties to the Convention, either directly or via the Convention Secretariat.</p>
Article 10: Public information, awareness and education	MfE	<p>MfE will continue to consider the requirements of Article 10 when undertaking projects relevant to the Convention.</p>

Article	Responsibility	Function – including measures
Article 11: Research, development and monitoring	MfE, Ministry of Health (MOH), Ministry for Primary Industries (MPI)	<p>MOH will continue, subject to resources, a biomonitoring programme (serum) appropriate for tracking the New Zealand population's exposure to POPs.</p> <p>MfE will continue to monitor the effectiveness of the NIP (relating to dioxin reduction, waste stocks and contaminated sites management) and monitor POPs in the environment.</p> <p>MPI will monitor relevant POPs in the food chain (through the New Zealand Total Diet Study, the National Chemical Contaminants Programme, and the National Chemical Residues Programme, as appropriate).</p>
Article 12: Technical assistance	MfE, Ministry of Foreign Affairs and Trade (MFAT)	MfE, in conjunction with MFAT and EPA, and subject to resources, will address requests for technical assistance.
Articles 13 and 14: Financial resources	MFAT	MFAT will consider New Zealand's level of commitment to the Global Environment Facility replenishment rounds.
Article 15: Reporting	MfE and EPA	MfE and the EPA will collect the necessary information and prepare and submit future New Zealand reports, in accordance with the requirements of the Convention.
Article 16: Effectiveness evaluation	MfE	<p>MfE will continue to:</p> <ul style="list-style-type: none"> maintain international liaison and collaborate with the Convention Secretariat, as appropriate and subject to resources, in contributing to a global monitoring programme provide to the Convention Secretariat information gained from existing POP monitoring programmes and from any future research programmes.
Articles 17–30	The remaining articles concern the international administration of the Convention and are not considered relevant to this updated NIP.	

Chapter 1: National implementation plan process and the Stockholm Convention

This chapter summarises the national implementation plan (NIP) process in New Zealand and the persistent organic pollutants (POPs) listed under the Stockholm Convention on Persistent Organic Pollutants (the Convention) since 2001.

1.1 New Zealand and the Stockholm Convention

The Convention is a multilateral environmental agreement committing governments to take measures to protect human health and the environment from the negative effects of POPs. Its goal is to reduce and, where feasible, eliminate the production and environmental release of the chemicals listed under the Convention.

New Zealand signed the Convention in 2001 and ratified it in 2004. The Ministry for the Environment (MfE) leads New Zealand's participation in the Convention and coordinates the Convention's implementation across government.

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1.2 National implementation plan process in New Zealand

Article 7 of the Convention requires each party to develop an NIP. The NIP outlines how a country will address its obligations under the Convention. New Zealand submitted its first NIP in 2006, followed by an Addendum in 2014. It released further NIPs in 2018 and 2022.

1.2.1 National Implementation Plan 2006 (NIP1)

NIP1 outlined how New Zealand implemented measures to meet Convention obligations on the initial 12 chemicals listed under the Convention in 2001 and which entered into force in New Zealand in 2004 (see tables 2–4 for the relevant Convention annexes for these listed chemicals).

1.2.2 National Implementation Plan Addendum 2014 (NIP Addendum)

New Zealand submitted an Addendum to NIP1 concerning the 2011 listing of technical endosulfan and its related isomers. The Addendum is available on the [Convention website](#).

1.2.3 National Implementation Plan 2018 (NIP2)

NIP2 outlines New Zealand's implementation measures in relation to the chemicals added to the Stockholm Convention since New Zealand completed its NIP1.

1.2.4 National Implementation Plan 2022 (NIP3)

NIP3 outlines New Zealand's implementation measures in relation to the chemicals listed to the Stockholm Convention since New Zealand submitted its NIP2. NIP3 also reports on New Zealand's achievements in phasing out the 12 initial POPs and additions from NIP2.

1.2.5 National Implementation Plan 2026 (NIP4)

NIP4 updates NIP3 and outlines New Zealand's implementation measures in relation to the chemicals listed to the Stockholm Convention agreed on during the 10th and 11th Conferences of the Parties.

Developing National Implementation Plan 4

NIP4 was developed by MfE, with participation from the Department of Internal Affairs, the Environmental Protection Authority, Ministry for Business, Innovation and Employment, Ministry for Primary Industries, Ministry of Foreign Affairs and Trade, Ministry of Health, New Zealand Customs Service, the Water Safety Authority – Taumata Arowai, and WorkSafe.

Context for this plan

Previous implementation plans outlined New Zealand's historical importation, manufacture and use of POP chemicals. They presented New Zealand's efforts in:

- eliminating releases from intentional production and use of POPs
- reducing and eliminating releases from unintentional production of POPs
- reducing and eliminating stockpiles, and waste management
- research, development and monitoring the effects of POPs on New Zealanders and the environment.

New Zealand had banned all original POPs by the time it signed the Convention. By 2006, New Zealand already had laws and regulations in place to tightly control the import, export, manufacture and use of POPs and the disposal of POP hazardous waste, including its collection, handling and transport.

All the controls on listings added since 2004 are in force.

NIP4 includes amendments made at the 10th and 11th Conferences of the Parties in 2022 and 2023 respectively to list perfluorohexane sulfonic acid (PFHxS), methoxychlor, Dechlorane Plus and UV-328 in Annex A of the Convention.

Goal

NIP4's goal is to protect human health and the environment from POPs, by implementing the Convention.

Objectives

New Zealand's objectives for NIP4 are to:

- communicate the actions taken to implement the Convention
- assess progress taken to date to eliminate and reduce the use of POPs in New Zealand
- identify actions needed to eliminate and reduce the use of 'new POPs'
- update and continue to implement New Zealand's action plan for dioxins and other unintentionally produced POPs
- dispose of POP stockpiles and manage sites contaminated by POPs
- comply with the Convention.

Outcomes

New Zealand's anticipated outcomes for NIP4 are to:

- continue to protect human health from POPs as the concentration and amount of POPs present in the human body at any given time (also known as body burden) decline, as shown from previous biomonitoring studies
- continue to safeguard the high quality of New Zealand primary products (especially meat and dairy foods)
- manage the effects of POPs on New Zealand's environment and continue to protect New Zealand's environment from POPs
- fully comply with the Convention.

1.3 Persistent organic pollutants listed under the Stockholm Convention

The Convention requires parties to apply control measures on the POPs listed. Tables 2–4 outline the chemicals listed under the Convention, when they were listed, and when New Zealand implemented the measures.

Listed chemicals are divided into three groups (annexes) according to how each is produced and the level of restriction required.

Annex A of the Convention contains a list of POPs to be eliminated (table 2). Convention parties have an obligation to eliminate production and use as well as imports and exports of these chemicals, except for when a country has registered for a specific exemption when accepting the listing.

Table 2: Chemicals listed in Annex A of the Convention – to be eliminated

Chemical	Year listed under Stockholm	Year entered into force for New Zealand
Aldrin	2001	2004
Chlordane	2001	2004
Dieldrin	2001	2004
Endrin	2001	2004
Heptachlor	2001	2004
Hexachlorobenzene (HCB)	2001	2004
Mirex	2001	2004
Polychlorinated biphenyls (PCBs)	2001	2004
Toxaphene	2001	2004
Alpha hexachlorocyclohexane (alpha-HCH)	2009	2016
Beta hexachlorocyclohexane (beta-HCH)	2009	2016
Chlordecone	2009	2016
Hexabromobiphenyl	2009	2016
Hexabromodiphenyl ether (hexaBDE) and heptabromodiphenyl ether (heptaBDE)	2009	2016
Lindane	2009	2016
Pentachlorobenzene (PeCB)	2009	2016
Tetrabromodiphenyl ether (tetraBDE) and pentabromodiphenyl ether (pentaBDE)	2009	2016
Technical endosulfan and its related isomers	2011	2012
Hexabromocyclododecane (HBCD)	2013	2016
Hexachlorobutadiene (HCBD)	2015	2016
Pentachlorophenol (PCP) and its salts and esters	2015	2016
Polychlorinated naphthalenes (PCNs)	2015	2016
Decabromodiphenyl ether (decaBDE) (commercial mixture, c-decaBDE)	2017	2018
Short-chain chlorinated paraffins (SCCPs)	2017	2018
Dicofol	2019	2020
Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds	2019	2020
Perfluorohexane sulfonic acid (PFHxS)	2022	2023
Methoxychlor	2023	2025
Dechlorane Plus	2023	2025
UV-328	2023	2025

Annex B of the Convention lists POPs to be restricted to uses contained in the annex (table 3).

Table 3: Chemicals listed in Annex B of the Convention – restricted use

Chemical	Year listed under Stockholm	Year entered into force for New Zealand
1,1,1-trichloro-2, 2-bis (4-chlorophenyl) ethane (DDT)	2001	2004
Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOS-F)	2009	2016

Annex C of the Convention lists POPs produced and released as unintentional by-products of specific processes (table 4). The obligation is to take measures to avoid the unintentional production and release of the listed POPs.

Table 4: Chemicals listed in Annex C of the Convention – avoid unintentional production and release

Chemical	Year listed under Stockholm	Year entered into force for New Zealand
Hexachlorobenzene (HCB)	2001	2004
Polychlorinated biphenyls (PCBs)	2001	2004
Polychlorinated dibenzo-p-dioxins (PCDDs)	2001	2004
Polychlorinated dibenzofurans (PCDFs)	2001	2004
Pentachlorobenzene (PeCB)	2009	2016
Polychlorinated naphthalenes (PCNs)	2015	2016
Hexachlorobutadiene (HCBD)	2017	2018

Chapter 2: Overview of New Zealand and its regulatory framework to implement the Stockholm Convention

This chapter provides an overview of New Zealand and its historical use of persistent organic pollutants (POPs). It outlines the regulatory framework to control POPs in New Zealand in the broader context of hazardous substances management.

2.1 Country profile and history of use in New Zealand

New Zealand's low population density, strong agricultural and natural resource-based economy means implementing the Stockholm Convention on Persistent Organic Pollutants (the Convention) presents different challenges and opportunities, compared with many other countries. Historically, the predominant use of POPs in New Zealand has been as pesticides. In most cases, limited amounts of industrial POPs were manufactured in New Zealand and, where this occurred, it was much smaller in scale compared with elsewhere in the world. Most POPs were imported, often as part of consumer products. New Zealand's use of POPs pesticides had already substantially declined before the Stockholm Convention commenced in 2004.

In recent times, the use has shifted to POPs in manufactured articles. The chemical structures and supply chains of these POPs are more complicated than pesticides, which means New Zealand (along with other countries) faces challenges in the ongoing implementation of the Convention and protecting the environment and human health from these POPs.

Generally, POPs still present in New Zealand are as a result of 'articles in use', for example flame retardants in electrical equipment, and there is a growing challenge in the management of POPs in products used and consumed here.

New Zealand's use of POP pesticides from the mid-1940s to the 1960s was mainly in agriculture, horticulture and timber treatment. Smaller amounts were also used in public parks and by home gardeners. Only a few instances of POPs being produced in New Zealand have been reported. Of note is the Corteva Agriscience (NZ) Ltd site in New Plymouth (formerly Ivon Watkins Dow, Dow AgroSciences) which manufactured the herbicide 2,4,5-T from 1962 to 1988, and the key raw material trichlorophenol (TCP) from 1969 to 1987. A particular dioxin called 2,3,7,8-TCDD is a known contaminant of these products, although this dioxin also occurs from other sources. The manufacture of dioxin and the impact on human health has been investigated in at least 11 successive studies by agencies such as the Ministry of Health, the Royal Society of New Zealand and the Ministry for the Environment (MfE), identified in PCE's report: [The Management of Hazardous Wastes Disposal: A Review of Government Systems](#). Further studies on community level exposures have been conducted, for example, of [TCDD Exposures in Paritūtū, New Zealand](#).

Another example of historical production of POPs as active ingredients is the Fruitgrowers Chemical Company in Māpua, where POPs such as the organochloride insecticides DDT, dieldrin and aldrin were produced until the site closed in 1988. After the closure, responsibility for the clean up was taken on jointly by the Tasman District Council and MfE but became the sole responsibility of MfE in 2004. For more information read [Cleaning up Mapua: The story of the Fruitgrowers' Chemical Company site](#).

The use of some well-known early POPs, such as 1,1,1-trichloro-2, 2-bis (4-chlorophenyl) ethane (DDT), chlordane and dieldrin, ceased from the mid-1970s to late 1980s.

Under the Hazardous Substances and New Organisms (HSNO) Act 1996, all polychlorinated biphenyls (PCBs) were required to be withdrawn from use and destroyed no later than 2016. It is likely small amounts remain, particularly on rural properties where the owners may not realise they have PCBs stored.

Some POPs listed under the Convention since 2001 have never been manufactured (end-use formulation) or used in New Zealand. Others, such as lindane, bromodiphenyl ethers (BDEs), hexabromocyclododecane (HBCD) and pentachlorophenol (PCP), have been prevalent, predominately through imported products rather than manufacture.

Use of perfluorooctane sulfonic acid (PFOS) firefighting foams was banned in 2006. In 2018, the Government investigated cases of non-compliant use of PFOS firefighting foams and legacy contamination and found no intentional non-compliance, but the investigation under the lead of the EPA found supplies of PFOS across New Zealand. The EPA sought to ensure that any non-compliant foam was removed and disposed of safely. It also required that any places or equipment in contact with the foam were decontaminated, and that clean-up materials were appropriately disposed of. Where PFOS-contaminated foam was unable to be replaced immediately (eg, for public safety in the event of an air crash), the EPA allowed organisations to store it (in compliance with applicable EPA hazardous substances requirements) until a replacement could be found. Read the [Findings of the EPA national investigation into firefighting foams containing PFOS report](#).

In December 2025 all foams containing PFOA-related substances were banned from use at the expiry of the exemption period allowed under the Convention listing.

This historical import, manufacture and use of POP chemicals has impacted New Zealand's environment and people.

2.2 Domestic policy and regulatory controls

Article 3 of the Convention requires parties to establish the legal and administrative framework for eliminating the intentional production and use of POPs. This section updates New Zealand's policy and regulatory framework relating to the Convention's implementation.

2.2.1 Policy framework across government

The Convention and management of POPs require cross-government coordination. Each relevant agency's main functions, and their contribution to the Convention's implementation, are summarised below.

Ministry for the Environment

MfE leads New Zealand's participation in the Convention. Its role is to advise the New Zealand Government on environmental issues. MfE is responsible for environmental legislation relevant to POPs, in particular the Resource Management Act 1991 (RMA), HSNO Act 1996 and Waste Minimisation Act 2008 (WMA), as well as administering the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004 (the I&E Order). MfE also monitors the performance of the Environmental Protection Authority (EPA) on behalf of the Minister for the Environment.

New Zealand Customs Service

The New Zealand Customs Service (Customs) is the border enforcement agency. Where practicable it monitors the cross-border movement of goods for compliance with relevant legislative requirements. Importers and exporters are required to lodge electronic entries with Customs for goods imported into and exported from New Zealand. Such entries are lodged in accordance with global Customs rules and are classified in accordance with the harmonised Customs' nomenclature system. In practice, shipments identified by their classification as being covered by an import or export restriction are held by Customs until the importer or exporter produces the required approval from the government agency with legislated responsibility for issuing the approval. If approval is not given, the goods, as unlawful imports/exports, are forfeit and may be seized by Customs. The unlawfulness of the import/export remains, whether or not identifiable by classification, and the obligation for meeting import/export approvals rests with the importer/exporter.

Environmental Protection Authority

The EPA) has regulatory responsibilities for contributing to the efficient, effective and transparent management of New Zealand's environment, natural and physical resources. It also has the function of enabling New Zealand to meet its international obligations.

In relation to the Convention's implementation, the EPA is responsible for regulating hazardous substances (including POPs) under the HSNO Act 1996. This includes pesticides, industrial chemicals, household chemicals, cosmetics, and other dangerous goods. The EPA is responsible for approving new hazardous substances for use in New Zealand and implementing rules to manage any risks to people and the environment associated with the use of hazardous substances.

The EPA is also responsible for regulating and enforcing any domestic bans on POPs listed under the HSNO Act 1996. Regulation of storage, handling and disposal is done through the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004. This Notice is currently being revised.

Under the HSNO Act, the EPA issued the Fire Fighting Chemicals Group Standard 2021. This implements the phase-out of fire-fighting foam products containing PFOA, it salts and PFOA-related compounds in accordance with the specific exemption in the listing of that POP in Annex A of the Convention.

Under the I&E Order the EPA is authorised to grant permits for exportation of POPs and hazardous waste (including POP wastes) in accordance with New Zealand's obligations under the Convention and other international agreements.

Ministry of Health

The Ministry of Health (MOH) is responsible for advising on health policy, including environmental health, health protection criteria for POPs in drinking water and the impact on public health from exposure to POPs. MOH periodically commissions biomonitoring studies of the concentrations of POPs in the New Zealand population (see [chapter 7](#)).

The Water Services Authority – Taumata Arowai

The Water Services Authority – Taumata Arowai was formed in 2021 and has the regulatory responsibility for drinking water in New Zealand, with the introduction of the Water Services Act 2021. The agency is responsible for protecting people and communities from serious risk to their health due to the quality or quantity of drinking water being supplied and supports the water services sector to improve its performance and environmental outcomes. This includes requiring water suppliers to monitor for several POPs in drinking water supply. The Water Services Authority – Taumata Arowai also has some oversight functions for wastewater and stormwater.

Ministry of Foreign Affairs and Trade

The Ministry of Foreign Affairs and Trade (MFAT) advises on New Zealand's international involvement on POP issues. It coordinates the New Zealand Government's financial support to the Convention (via the Global Environment Facility).

Ministry for Primary Industries

The Ministry for Primary Industries (MPI) is responsible for issues relating to POPs in foods, particularly dioxins. Agricultural compound-based POPs used in historic products need to comply with the Food Act 2014 and its regulations relating to maximum residue levels for agricultural compounds. In addition, the Animal Products Act 1999 sets requirements including limits for agricultural compounds and contaminants in animal produce for export and an associated monitoring and surveillance programme. MPI works closely with Food Standards Australia New Zealand to protect consumers from any risk posed by POPs not used as agricultural compounds in food by making sure appropriate food standards are included in the joint Australia New Zealand Food Standards Code.

The national Total Diet Study (NZTDS) includes agrichemical and PFAS testing across a wide range of commercially available foods. The 2024 NZTDS (report in progress), also includes analysis of breastmilk for a number of POPs (2024 NZ Total Diet Study) (see [chapter 7](#)).

MPI is also responsible for policy and regulation of agricultural compounds and veterinary medicines under the Agricultural Compounds and Veterinary Medicines Act 1997 (ACVM Act), including their import, manufacture, and sale. This includes prohibiting the use of POPs as agricultural compounds via regulations. MPI periodically releases studies relating to New Zealand's primary industry and POPs (see [chapter 7](#)).

Ministry of Business, Innovation and Employment

The Ministry of Business, Innovation and Employment (MBIE) is responsible for policy relating to workplace safety, including administration of the Health and Safety at Work Act 2015 (HSWA).

MBIE also administers the Imports and Exports (Restrictions) Act 1988 (although MfE has oversight of the I&E Order).

WorkSafe New Zealand

WorkSafe is New Zealand's primary workplace health and safety regulator. WorkSafe is responsible for the use, storage and handling of hazardous substances in workplaces, which can include POPs.

2.2.2 Regulatory framework

New Zealand has a largely decentralised system of environmental governance. Many regulatory and compliance functions are undertaken by local government within a policy framework set nationally by central government. This policy framework regarding POPs is set in legislation in the following Acts:

Hazardous Substances and New Organisms Act 1996

The HSNO Act 1996 is the primary legislation that implements New Zealand's principal obligations under the Convention. The Act's purpose is to protect the environment and health and safety of people and communities by preventing or managing the adverse effects of hazardous substances and new organisms. The passing of the HSNO Act in June 1996 represented one of the most significant reforms of environmental legislation since the RMA in 1991.

Schedule 1AA under the HSNO Act contains the verbatim text of the Convention and its annexes. When the Convention is amended, this schedule also needs to be updated.

Prohibitions on the import, manufacture, use and storage of POPs are listed in sections 25A and 25B of this Act and the exceptions are provided for by sections 29B and 30. Section 66A provides for disposal and has restrictions on use. Schedule 2A of the HSNO Act 1996 lists all POPs added to the Convention between 2001 and 2023. Schedule 2A will be updated as New Zealand implements future amendments to the Convention.

Schedule 2A-listed POPs, including wastes and unused stocks of POPs, are subject to rules relating to collection, storage and disposal, as specified in the Hazardous Substances (Storage and Disposal of POPs) Notice 2004, which is administered by EPA.

The EPA is the decision-making body for hazardous substances (including POPs) under the HSNO Act. Several agencies undertake enforcement, depending on where the hazardous substance is being used. The EPA has an explicit enforcement role in respect of POPs. HSNO Act enforcement agencies include the EPA, WorkSafe, MOH, New Zealand Transport Agency, New Zealand Police, Civil Aviation Authority of New Zealand, Maritime New Zealand, and local government.

Food Act 2014

The purpose of the Food Act 2014 is to achieve safety and suitability of food for sale and provide confidence in New Zealand's food safety regime.

The Food Act sets out maximum residue limits of agricultural compounds and other contaminants. All foods sold in New Zealand or intended for export must comply with this notice. It 'captures' the presence of POPs in food only at the end of production.

Animal Products Act 1999

The objective of the Animal Products Act 1999 is to minimise and manage risks to human or animal health arising from the production and processing of animal material and products by instituting measures that ensure, as far as is practicable, that all traded animal products are fit for their intended purpose. It also is to facilitate the entry of animal material and products into overseas markets by providing the controls and mechanisms needed to give and to safeguard official assurances for entry into those markets.

The Animal Products Act sets out a contaminant monitoring and surveillance plan and specifies sampling requirements for monitoring regimes of animal material.

Resource Management Act 1991

The Resource Management Act (RMA) is New Zealand's primary legislation that outlines how the environment should be managed. The Act provides an overarching guide for environmental management, with national direction on significant issues, including the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 and Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, which are important mechanisms in New Zealand's implementation of the Convention.

In March 2025, the Government announced it would repeal the RMA and enact new legislation based on the recommendations of an expert advisory group. The new bills were introduced to Parliament in December 2025.

The two bills are the:

- Natural Environment Bill, focused on the use, protection and enhancement of the natural environment
- Planning Bill, which will establish a framework for planning and regulating the use, development and enjoyment of land.

Find out more about the [resource management reform](#) on the MfE website.

The Resource Management (National Environmental Standards for Air Quality) Regulations 2004 set seven standards banning activities that discharge significant quantities of dioxins and other toxins into the air. This includes banning the burning of insulated copper wire, oil or tyres in the open, burning road seal, and high-temperature incineration of hazardous wastes.

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 set planning controls and soil contaminant values. The regulations ensure that land affected by contaminants (including POPs) in the soil is appropriately identified and assessed before it is developed and, if necessary, that the land is remediated or the contaminants contained to make the land safe for human use. More information about the contaminated land regulatory framework is provided in [chapter 6](#).

RMA and hazardous substances

The RMA allows local government to set planning controls or conditions on resource consents in relation to hazardous substances. Local government has a responsibility to achieve integrated management of the natural and physical resources of the region or district. This

includes safeguarding the life-supporting capacity of air, water, soil and ecosystems and avoiding, remedying or mitigating any adverse effects of activities on the environment.

Local government can use this function to place additional controls on hazardous substance use or any discharge of hazardous substances to the environment under the RMA. Councils do this if existing HSNO Act or HSWA regulations are not adequate to address specific environmental effects of hazardous substances in any particular case (including managing the risk of potential effects on the local environment). The areas not specifically addressed by the HSNO Act and HSWA are, in general, location or area-specific issues, such as sensitive environments, or unique ecological areas or issues, such as discharge to air of hazardous waste by-products (ie, dioxins).

Health and Safety at Work Act 2015

The Health and Safety at Work Act 2015 (HSWA), New Zealand's workplace health and safety law, came into effect on 4 April 2016. The Act governs how hazardous substances are used in the workplace, which can include controls relevant to POPs and their handling by workers.

The HSWA changed the system for managing hazardous substances in workplaces in December 2017. The management of hazardous substances in the workplace is now covered by both the HSWA administered by WorkSafe and the HSNO Act 1996 administered by EPA.

Rules for use of hazardous substances in the workplace have been moved to the Health and Safety at Work Act (Hazardous Substances) Regulations 2017 and are overseen by WorkSafe.

In December 2017, the EPA became the main enforcement agency for checking whether chemicals are approved and for setting environmental controls (including rules relating to disposal of POPs). WorkSafe is still the primary enforcement agency of HSNO rules for disposal and environmental protection in workplaces.

Agricultural Compounds and Veterinary Medicines Act 1997

The ACVM Act's purpose is to prevent or manage risks (as defined in the Act) associated with the use of agricultural compounds. The Act ensures the provision of sufficient consumer information about agricultural compounds, and that their use does not result in breaches of domestic food residue standards.

The two main authorisation mechanisms under the Act are registration or exempting groups of products from registration (noting the latter is not exempting them from the Act, rather from registration).

Many products under the ACVM Act are also hazardous substances. As such, an approval under the HSNO Act 1996 is required before a registration can be given under the ACVM Act. This means no products registered under the ACVM Act should contain POPs, because a HSNO approval will not be given to a POP or POP-containing product (except in limited circumstances). In addition, the ACVM (Exemptions and Prohibited Substances) Regulations 2011 prohibit the use of POPs as agricultural compounds.

Imports and Exports (Restrictions) Prohibition Order (No 2) 2004

New Zealand is party to several multilateral agreements relating to the management, import and export of certain chemicals and hazardous waste, such as the Basel, Rotterdam and Stockholm conventions (see below).

The I&E Order controls the export of the POPs covered by the Stockholm Convention ([Schedule 1](#)). The Schedule includes all of the Stockholm Convention POPs up to and including 2023.

The I&E Order legislates restrictions on the export of chemicals and wastes covered by the Rotterdam, Stockholm and Basel conventions. It requires that a permit issued by the EPA is in place prior to the export. It also prescribes that the EPA must issue such a permit providing the legislated conditions are met.

Waste Minimisation Act 2008

MfE administers the Waste Minimisation Act 2008. This Act encourages a reduction in the amount of waste generated and disposed of in New Zealand. It aims to protect the environment from harm and provide environmental, social, economic and cultural benefits.

The New Zealand Government is currently progressing amendments to the Waste Minimisation Act 2008 (WMA) and the Litter Act 1979 (Litter Act), to create modernised and fit-for-purpose waste legislation and ensure funds generated by the expanded waste disposal levy are used efficiently. The amendments include a proposal for a new Extended Producer Responsibility (EPR) framework that will better enable product stewardship schemes.

The waste strategy was updated and released in 2024. Find out more about waste legislation and strategy under development on the [MfE website](#).

In July 2020, the Government announced six products to be declared ‘priority products’ for the establishment of regulated product stewardship schemes under the Waste Minimisation Act 2008 (WMA). The products are:

- plastic packaging
- tyres (Tyrewise scheme fully operational since 1 September 2024)
- electrical and electronic products (e-waste including large batteries)
- agrichemicals and their containers
- refrigerants
- farm plastics.

MfE is working with industry and relevant stakeholders to develop product stewardship schemes for each priority product group. Following industry-led scheme design, the recommended approach is considered by government. Subject to Cabinet decisions MfE will then undertake public consultation on proposed enabling regulations under the WMA, to support scheme implementation.

Under the WMA, the Minister for the Environment can also grant accreditation to product stewardship schemes. The [Agrecovery](#) rural recycling programme scheme to manage agrichemicals, their containers and farm plastics in New Zealand is one such accredited scheme. Agrecovery has previously been funded to enable POPs and other hazardous substances to be collected and disposed of safely. The voluntary industry led scheme is in the process of transitioning to a regulated scheme, which is likely to be operational in 2027 (see more in [chapter 6](#)).

Water Services Act 2021

The Water Services Act 2021 is the primary legislative framework governing the safety, regulation and supply of drinking water in New Zealand. It is administered by the Water Services Authority – Taumata Arowai, which is responsible for regulating drinking water suppliers to ensure provision of safe drinking water, alongside providing national oversight of wastewater and stormwater networks. The Water Services Authority – Taumata Arowai carries out its role by setting rules and standards, providing guidance, monitoring and reporting to ensure compliance and transparency on drinking water suppliers and network operators.

The Water Services (Drinking Water Standards for New Zealand) Regulations 2022 set maximum acceptable values for determinands, including POPs, in drinking water. These values are not allowed to be exceeded at any time and apply to all drinking water suppliers. The maximum acceptable values are based on guideline values set by the World Health Organisation (WHO). See the Water Services (Drinking Water Standards for New Zealand) Regulations 2022.

Drinking water suppliers must comply with the Act, to ensure that the drinking water supplied by the supplier is safe. This includes complying with the Drinking Water Standard. The Water Services Authority – Taumata Arowai has also issued compliance rules through the Drinking Water Quality Assurance Rules 2022, which set out the requirements a drinking water supplier must comply with to ensure the drinking water they provide is safe. These were last updated in January 2025.

Wider multilateral agreements

New Zealand also implements other international conventions relevant to POPs. These are discussed below.

Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (Basel Convention)

New Zealand ratified the Basel Convention in December 1994. The I&E Order, established under the Imports and Exports (Restrictions) Act 1988, allows imports and exports of hazardous wastes only when permitted in circumstances that comply with the Basel Convention. Improper treatment or disposal of a waste consisting of, containing or contaminated with POPs can lead to releases of POPs. Some disposal technologies can also lead to the unintentional formation and release of POPs. Therefore, wastes consisting of, containing or contaminated with POPs can be covered by a number of listings in Annexes I and VIII of the Basel Convention. See the [General technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants \(POPs\)](#).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention)

New Zealand ratified the Rotterdam Convention in 2003. The I&E Order controls the export of chemicals listed under the Rotterdam Convention.

New Zealand's decisions on the import of hazardous substances, including Rotterdam chemicals, are made under the HSNO Act.

2.2.3 Non-regulatory initiatives

In addition to a comprehensive regulatory framework, New Zealand has developed non-regulatory initiatives that have contributed to the implementation of the Stockholm Convention. These include the [Contaminated Sites and Vulnerable Landfills Fund](#), [Waste Minimisation Fund](#) and [product stewardship initiatives](#) (see more in [chapter 6](#)).

Chapter 3: Initial Annex A and Annex B persistent organic pollutants

This chapter summarises the measures in annexes A and B of the Convention for the initial persistent organic pollutants (POPs) and provides an update on New Zealand’s efforts to eliminate polychlorinated biphenyls (PCBs) and legacy pesticides.

3.1 Convention obligations

Article 3 of the Convention requires that parties eliminate releases from the intentional production and use of POPs. When New Zealand ratified the Convention in 2004, 12 initial POPs were listed. Full details of New Zealand’s approach to these POPs are found in NIP1.

3.2 Initial persistent organic pollutants

For reference, table 5 shows the measures New Zealand needs to comply with for the initial POPs listed in annexes A and B.

Table 5: Initial persistent organic pollutants and their historical use in New Zealand

Annex A chemicals	Measure	Year	Description
Aldrin	Restriction in accordance with Annex A	2004	Introduced in New Zealand in 1954 as stock remedy in sheep sprays or dips for controlling sheep ectoparasites. Used to control horticultural pests and in limited quantities to control household spiders.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Chlordane	Restriction in accordance with Annex A	2004	A broad-spectrum agricultural insecticide. Also used in the timber industry as a treatment against termites and borer, and as an insecticide in glues used for the manufacture of plywood, finger jointed and laminated timber.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Dieldrin	Restriction in accordance with Annex A	2004	Introduced in New Zealand in 1954 as stock remedy in sheep sprays or dips for controlling sheep ectoparasites. Used to control agricultural pests and used for timber preservation (mostly in plywood glues) and to mothproof carpets.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Endrin	Restriction in accordance with Annex A	2004	Only small amounts were ever used in New Zealand.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	

Annex A chemicals	Measure	Year	Description
Heptachlor	Restriction in accordance with Annex A	2004	Only small amounts were ever used in New Zealand.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Hexachlorobenzene (HCB)	Restriction in accordance with Annex A	2004	Used experimentally between 1970 and 1972 as a seed-dressing fungicide for cereal grain.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Mirex	Restriction in accordance with Annex A	2004	Only limited quantities were used for control of public health pests.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Polychlorinated biphenyls (PCBs)	Restriction in accordance with Annex A	2004	Manufactured from 1930 to late 1970s. Used widely in industry throughout the world. Imported and used (but not manufactured) in New Zealand. Uses were many and varied, including as electrical transformer oils, dielectric fluids, electrical capacitors, heat transfer fluids, hydraulic fluids, solvent extenders, flame retardants, plasticisers, some paints and printing inks, immersion oils and sealants.
	Prohibition on production	2004	
	Prohibition on all uses	2016	
	Prohibition on import	2004	
	Prohibition on export	2004	
Toxaphene	Restriction in accordance with Annex A	2004	Only small amounts were ever used in New Zealand.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	
Annex B chemicals	Measure	Year	
1,1,1-trichloro-2,2-bis(4-chlorophenyl) ethane (DDT)	Restriction in accordance with Annex B	2004	Used mainly as a pasture insecticide to control grass grub (<i>Costelytra zealandica</i>) and porina (<i>Wiseana sp.</i>) caterpillars. It was frequently mixed with fertiliser or lime and applied to agriculture pastures, as well as to lawns, market gardens and parks.
	Prohibition on production	2004	
	Prohibition on all uses	2004	
	Prohibition on import	2004	
	Prohibition on export	2004	

3.3 Progress since previous National Implementation Plans

New Zealand has not produced the initial POPs listed in annexes A or B since their phase out in the late 1980s. See [chapter 6](#) for information about the waste management of POPs.

3.3.1 Phasing out polychlorinated biphenyls

New Zealand's PCB inventory and disposal programme pre-dates the Convention (refer to [New Zealand's NIP1](#)). All uses of PCBs were initially banned under the Toxic Substances Act 1979, with some registered exemptions, until this Act was repealed. The Hazardous Substances and New Organisms (HSNO) Act 1996, which followed, banned the importation, manufacture, use and storage of PCBs in New Zealand while allowing for the continuation of exemptions to facilitate a programmed phase-out. All PCBs in New Zealand had to be withdrawn from use and destroyed no later than 31 December 2016. Before that date, management and disposal of PCBs were covered by the Hazardous Substances (Storage and Disposal of Polychlorinated Biphenyls) Notice 2007 (PCBs Notice).

The New Zealand PCB phase-out is now complete, ahead of the Convention's deadline of 2025. Between 2010 and 2016, almost NZ\$2 million was allocated by the Ministry for the Environment's (MfE) Waste Minimisation Fund for the collection and environmentally sound disposal of PCBs, and 174.188 tonnes of PCBs were disposed of (table 6). New Zealand's national reports (available on the [Convention website](#)) include four-yearly reporting on PCBs. New Zealand's [most recent report](#) was submitted in August 2022.

Table 6: Polychlorinated biphenyls waste disposal (in tonnes)

Year	Total quantity of disposal (t)
2010	109.400
2012	12.556
2014	48.664
2016	3.568

It is possible that small amounts of PCBs (as with other POPs) will continue to be found. PCBs must now be managed similarly to other POPs, and a framework is in place to manage their storage and disposal. The Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 sets requirements for:

- the storage of PCBs
- notification by collectors of PCBs to the Environmental Protection Authority (EPA)
- specific controls to be met in relation to packaging, emergency management, and identification duties of collectors.

A [practical guide](#) is available for anyone involved in the handling, storage, transport and disposal of PCBs.

In addition to facilitating the collection and disposal of PCBs, prosecution mechanisms have also been used, when necessary. For example, in July 2014, a company was fined NZ\$10,000 for storing 36 tonnes of PCBs and failing to provide a management plan to EPA that adequately

provided for the PCB's ultimate disposal, as required by a compliance notice served in 2013. See [Julian's Electrical and Energy Conservation Limited](#) on the WorkSafe website.

Because New Zealand has no suitable facilities for the destruction of PCBs and PCB-containing equipment, such material must be sent to an approved overseas facility for destruction. This requires a permit from the EPA for the export of hazardous waste, in accordance with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

See [Polychlorinated Biphenyls \(PCBs\) – disposal guidance for business](#) on the EPA website for more information.

3.3.2 'DDT Muster'

NIP1 refers to a range of recovery programmes of POPs. In 2014, MfE funded the 'Identification, Collection and Offshore Disposal of POPs and Unknown Agrichemicals' project, commonly known as the 'DDT Muster'. The project was initiated because of a concern that at least 5 tonnes of DDT along with other legacy POP pesticides remained on rural properties because people were unsure of how to dispose of them. The muster provided the opportunity for individuals and businesses still holding any amount of DDT and other legacy POP pesticides on their property to make a confidential booking for them to be collected and sent offshore for disposal. See The [Great DDT Muster](#) on Timaru District Council's website.

Table 7 shows the volumes of DDT and other legacy POP pesticides transported overseas for destruction from 2013 to 2017.

Table 7: Volume of legacy persistent organic pollutant pesticides exported for destruction (kilograms per year)

Year	Total quantity of disposal (kg)
2013	8,337
2014	8,128
2015	15,876
2016	17,418
2017	17,766

MfE funding for the DDT Muster is now concluded.

Chapter 4: New Annex A and Annex B persistent organic pollutants

This chapter addresses the new chemicals added to annexes A and B of the Stockholm Convention on Persistent Organic Pollutants (the Convention) since 2009.

4.1 Convention obligations

Article 3 of the Convention requires that parties eliminate releases from the intentional production and use of persistent organic pollutants (POPs). Since the first National Implementation Plan (NIP1), 25 chemicals have been added to the Convention by the Conference of the Parties.

4.2 New persistent organic pollutants

Table 8 shows the measures New Zealand needs to comply with for the POPs added to annexes A and B of the Convention since NIP1. These POPs were used in New Zealand as pesticides or industrial chemicals.

Table 8: Persistent organic pollutants listed 2009–23, and year of New Zealand’s implementation measures

Annex A chemicals	Measure	Year	Exemption/articles in use
Alpha hexachlorocyclohexane (alpha-HCH)	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
Beta hexachlorocyclohexane (beta-HCH)	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
Chlordecone	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	

Annex A chemicals	Measure	Year	Exemption/articles in use
Decabromodiphenyl ether (commercial mixture, c-decaBDE)	Restriction in accordance with Annex A Prohibition on production Prohibition on all uses Prohibition on import Prohibition on export	2018 2018 2018 2018 2018	Specific exemptions for: <ul style="list-style-type: none"> • parts for use in vehicles, specified in paragraph 2 of Part IX of Annex A of the Convention. (Expires end of the service life of vehicles or in 2036, whichever comes earlier) • aircraft for which type approval has been applied for before December 2018 and has been received before December 2022 and spare parts for those aircraft (Expires end of the service life of those aircraft). Articles in use notification for articles where c-decaBDE has been used as an additive in plastics (such as in electrical and electronic equipment, wires, cables and pipes), in textiles (such as in carpets, upholstery, window blinds and curtains, and mattresses) and in adhesives, sealants and coatings – present in New Zealand before 18 December 2018. (No expiry date).
Dechlorane Plus	Restriction in accordance with Annex A Prohibition on production Prohibition on all uses Prohibition on import Prohibition on export	2025 2025 2025 2025 2025	Specific exemptions for use for replacement parts for, and repair of, articles where Dechlorane Plus was originally used in the manufacture of the following articles and may be available until 25 February 2030: <ul style="list-style-type: none"> • aerospace applications • space applications • defence applications • medical imaging and radiotherapy devices and installations. Specific exemptions for use for replacement parts for, and repair of, articles where Dechlorane Plus was originally used in the

Annex A chemicals	Measure	Year	Exemption/articles in use
			<p>manufacture of the following articles and may be available, until the end of the service life of the articles or 31 December 2043, whichever comes earlier:</p> <ul style="list-style-type: none"> • aerospace • space • defence • land-based motor vehicles • stationary industrial machines for use in agriculture, forestry and construction • marine, garden, forestry and outdoor power equipment • instruments for analysis, measurements, control, monitoring, testing, production and inspection (other than for medical devices or in-vitro diagnostic devices). <p>Specific exemptions for use for replacement parts for, and repair of, articles where Dechlorane Plus was originally used in the manufacture of the following articles and may be available, until the end of the service life of the articles:</p> <ul style="list-style-type: none"> • medical devices • in-vitro diagnostic devices. <p>Articles in use notifications for articles where Dechlorane Plus has been used as an additive in adhesives, sealants, polymers, cables and wires, wire harnesses, and connectors (in applications such as land-based motor vehicles, power equipment, industrial machinery, marine machinery, garden machinery, forestry machinery, medical equipment, aerospace,</p>

Annex A chemicals	Measure	Year	Exemption/articles in use
			defence, electrical equipment, electronic equipment, air conditioning, and heat pumps) present in New Zealand on or before 26 February 2025.
Dicofol	Restriction in accordance with Annex A	2020	N/A
	Prohibition on production	2020	
	Prohibition on all uses	2020	
	Prohibition on import	2020	
	Prohibition on export	2020	
Endosulfan	Restriction in accordance with Annex A	2011	
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
Hexabromobiphenyl	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
Hexabromocyclododecane (HBCD)	Restriction in accordance with Annex A	2016	Articles in use notification for expanded polystyrene and extruded polystyrene, which were manufactured before 1 January 2017. (No expiry date).
	Prohibition on production	2016	
	Prohibition on all uses	2016	
	Prohibition on import	2016	
	Prohibition on export	2016	
Hexabromodiphenyl ether (hexaBDE) and heptabromodiphenyl ether (heptaBDE) (commercial octabromodiphenyl ether (c-octaBDE))	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
Hexachlorobutadiene (HCBd)	Restriction in accordance with Annex A	2016	
	Prohibition on production	2016	
	Prohibition on all uses	2016	
	Prohibition on import	2016	
	Prohibition on export	2016	
Lindane	Restriction in accordance with Annex A	2016	
	Prohibition on production	2011	
	Prohibition on all uses	2015	
	Prohibition on import	2011	
	Prohibition on export	2011	
Methoxychlor	Restriction in accordance with Annex A	2025	N/A
	Prohibition on production	2025	
	Prohibition on all uses	2025	
	Prohibition on import	2025	
	Prohibition on export	2025	

Annex A chemicals	Measure	Year	Exemption/articles in use
Pentachlorobenzene (PeCB)	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
Pentachlorophenol (PCP) and its salts and esters	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2008	
	Prohibition on all uses	2008	
	Prohibition on import	2008	
	Prohibition on export	2016	
Perfluorohexane sulfonic acid (PFHxS)	Restriction in accordance with Annex A	2023	N/A
	Prohibition on production	2023	
	Prohibition on all uses	2023	
	Prohibition on import	2023	
	Prohibition on export	2023	
Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds	Restriction in accordance with Annex A	2020	<p>New Zealand has adopted the specific exemptions for PFOA, its salts, and PFOA-related compounds for the following:</p> <ul style="list-style-type: none"> photographic coatings applied to films (expires 3 December 2025) fire-fighting foam for liquid fuel vapour suppression and liquid fuel fires (Class B fires) in installed systems, including both mobile and fixed systems, in accordance with paragraph 2 of Part X of Annex A of the Stockholm Convention (expires 3 December 2025). <p>Articles in use notification for articles where PFOA, its salts and PFOA-related compounds have been in use, such as in coated textiles, papers, fluoropolymer membranes, or medical devices, in New Zealand on or before 3 December 2020 (no expiry date).</p>
	Prohibition on production	2020	
	Prohibition on all uses	2020	
	Prohibition on import	2020	
	Prohibition on export	2020	

Annex A chemicals	Measure	Year	Exemption/articles in use
Polychlorinated naphthalenes (PCNs)	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2016	
	Prohibition on all uses	2016	
	Prohibition on import	2016	
	Prohibition on export	2016	
Short-chain chlorinated paraffins (SCCPs)	Restriction in accordance with Annex A	2018	Articles in use notification for articles where SCCPs have been used as additives in rubber and plastic goods, in adhesives and sealants, and as water-proofing and flame-retardant agents for textiles – present in New Zealand before 18 December 2018. (No expiry date).
	Prohibition on production	2018	
	Prohibition on all uses	2018	
	Prohibition on import	2018	
	Prohibition on export	2018	
Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether)	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	
UV-328	Restriction in accordance with Annex A	2025	<p>Specific exemptions for use for replacement parts for, and repair of, articles where UV-328 was originally used in the manufacture of the following articles and may be available until 25 February 2030:</p> <ul style="list-style-type: none"> • parts of land-based motor vehicles • industrial coating applications for land-based motor vehicles, engineering machines, and rail transportation vehicles, and heavy-duty coatings for large steel structures • mechanical separators in blood collection tubes • triacetyl cellulose (TAC) film in polarizers • photographic paper. <p>Specific exemptions for replacement parts for articles where UV-328 was used in the manufacture of those articles in the following applications, until the end of the service life of the articles or 31 December</p>
	Prohibition on production	2025	
	Prohibition on all uses	2025	
	Prohibition on import	2025	
	Prohibition on export	2025	

Annex A chemicals	Measure	Year	Exemption/articles in use
			<p>2043, whichever comes earlier:</p> <ul style="list-style-type: none"> • land-based motor vehicles • stationary industrial machines for use in agriculture, forestry, and construction • liquid crystal displays in instruments for analysis, measurements, control, monitoring, testing, production, and inspection (other than for medical applications). <p>Specific exemptions for replacement parts for articles where UV-328 was used in the manufacture of those articles in the following applications for medical purposes, until the end of the service life of the articles:</p> <ul style="list-style-type: none"> • liquid crystal displays in medical devices and in-vitro diagnostic devices • liquid crystal displays in instruments for analysis, measurements, control, monitoring, testing, production, and inspection. <p>Articles in use notifications for articles where UV-328 has been used as an additive in paints, coatings, sealants, adhesives, plastics and rubbers, printing inks, cooling and hydraulic liquids, lubricants, and construction materials (in applications such as land-based motor vehicles, industrial machinery, electrical equipment, electronic equipment, medical and analytical equipment, air conditioning, and heat pumps) present in New Zealand on or before 26 February 2025.</p>

Annex B chemicals	Measure	Year	Exemption/articles in use
Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOS-F) ¹	Restriction in accordance with Annex A	2016	N/A
	Prohibition on production	2011	
	Prohibition on all uses	2011	
	Prohibition on import	2011	
	Prohibition on export	2011	

4.3 Overview of regulatory controls

Section 2.2.2 outlines the regulatory controls that apply to the elimination of POPs. Once the chemicals have been added to Schedule 2A of the HSNO Act 1996, their production, import and use is prohibited in New Zealand. However, the manufacture or import of POPs in containment in small amounts for use as laboratory analytical standards or for research and development may be allowed under section 30 of the HSNO Act. The Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 applies to all these. Controls on the export of POPs as chemicals, and the import and export of POP hazardous wastes are set under Schedules 1 and 3 of the I&E Order.

4.4 Eliminating releases from intentional production and use

The main information relevant to Article 3 is summarised for each chemical. The information is organised by the year in which the chemical was added to the Convention.

4.4.1 Persistent organic pollutants added to the Convention in 2009

Alpha hexachlorocyclohexane and beta hexachlorocyclohexane

The intentional use of alpha hexachlorocyclohexane (alpha-HCH) and beta hexachlorocyclohexane (beta-HCH) as an insecticide was phased out many years ago. These chemicals are produced as unintentional by-products of lindane.

The manufacture of alpha-HCH, beta-HCH and lindane has not occurred in New Zealand (table 9).

¹ This chemical is regulated by the HSNO Act 1996 as perfluorooctane sulfonic acid (PFOS) (CAS No: 1763-23-1), its salts and any derivatives of the formula C₈F₁₇SO₂X, where X = halide, amide, esters and other derivatives, including polymers.

Table 9: History of use and controls of alpha hexachlorocyclohexane and beta hexachlorocyclohexane

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
Major by-product of lindane manufacture in other countries, but not used in New Zealand.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.	Registration of hexachloro-cyclohexane as agricultural compounds or as ingredients in agricultural compounds has been prohibited since September 2004.	n/a

Chlordecone

Internationally, chlordecone, a synthetic chlorinated organic compound, was used mainly as an agricultural pesticide. It was first produced in 1951 and introduced commercially in 1958. No use or production of chlordecone in New Zealand has been reported (table 10). Trade names for chlordecone include Kepone® and GC-1189.

Table 10: History of use and controls of chlordecone

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
No reported use in New Zealand.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.	Registration of chlordecone as agricultural compounds or as ingredients in agricultural compounds is prohibited under the Agricultural Compounds and Veterinary Medicines Act 1997.	n/a

Hexabromobiphenyl

Hexabromobiphenyl belongs to the group of polybrominated biphenyls. This industrial chemical has been used as a flame retardant in synthetic fibres and plastics, mainly in the 1970s. According to available information, hexabromobiphenyl is no longer produced or used in most countries, including New Zealand (table 11). Alternatives are available for all uses. Trade names include FireMaster BP-6 and FireMaster FF-1.

Table 11: History of use and controls of hexabromobiphenyl

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
No significant use in New Zealand.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.	n/a	n/a

Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether)

Hexabromodiphenyl ether (hexaBDE) and heptabromodiphenyl ether (heptaBDE) are the main components of commercial octabromodiphenyl ether (c-octaBDE). These chemicals belong to the bromodiphenyl ether (BDE) family.

Polybromodiphenyl ether congeners (including tetrabromodiphenyl ether (tetraBDE), pentabromodiphenyl ether (pentaBDE), hexaBDE and heptaBDE) inhibit or suppress combustion in organic materials and, therefore, were used as additive flame retardants.

The main former use of c-octaBDE was in acrylonitrile-butadiene-styrene thermoplastics, particularly those used for electronic goods, such as computer monitor and television casings, photocopiers, microwave ovens, laptops and printers. It was also used in coatings and lacquers, and in polyurethane foam for auto upholstery.

Production of c-octaBDE stopped in the European Union (EU), United States of America and Pacific Rim in 2004, and no information is available indicating it is being produced in developing countries.

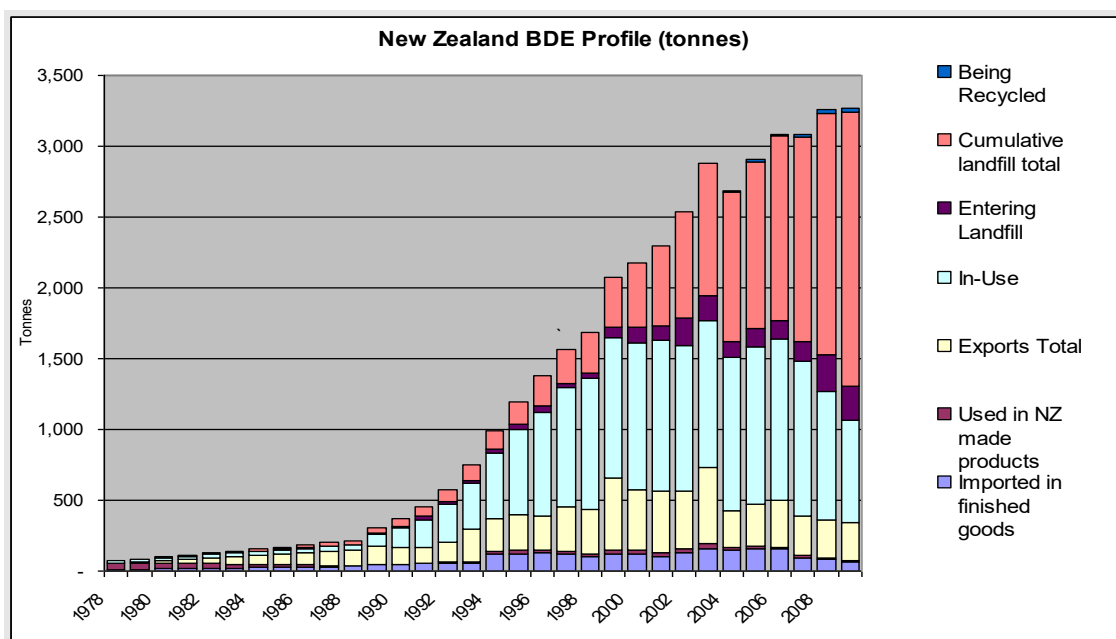
New Zealand is likely to have had a lower level of BDEs in imported and exported products than the EU and North America. This is due to the absence of a regulation that required household goods to contain flame retardants in New Zealand (compared with EU countries and the United Kingdom of Great Britain and Northern Ireland, which had this requirement introduced in the late 1980s).

The main source of BDEs in New Zealand has come from imports of finished consumer products imported within the past decades (mainly from developing countries), polymer resin used in the manufacture of New Zealand products, and in chemical compound form for production of polymer products for specific applications. Such applications include drapes, furnishings and furniture in hospitals, schools, cinemas and other public places. BDEs were never manufactured in New Zealand.

Consumer products that may contain BDEs include electrical and electronic equipment (televisions, stereos, computers, printers, faxes, switches, plugs), household appliances (electrical heaters, hairdryers, hair tongs, dishwashers, fridges, kettles, toasters) and furniture and upholstery (curtains, drapes, car interiors) (table 12).

Figure 1 lists estimated quantities of BDEs in various sources in the New Zealand environment between 1978 and 2010.

Figure 1: New Zealand bromodiphenyl ether profile, 1978–2010



Source: Keet et al, 2010

Note: All figures in the graph are annual tonnages, except for the landfill figures, which represent the cumulative tonnages of bromodiphenyl ethers present in landfills.

Annual 'in-use' tonnages comprise the net amount in any one year made up from (i) the imported goods still in use plus (ii) the products made in New Zealand and still in use in New Zealand (ie, both (i) and (ii) are accumulated over the product lifetimes) minus (iii) any exports and (iv) articles disposed to landfill.

Very few articles containing commercial pentaBDE and octaBDE are likely to be recycled in New Zealand.

Table 12: History of use and controls of hexabromodiphenyl ether and heptabromodiphenyl ether

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
Not manufactured in New Zealand but used in articles imported and manufactured because was present as flame retardants in plastics (for example, casings of electronic equipment).	Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.	n/a	Management of existing articles, and waste-stream management when they become waste.

Lindane

Lindane is the common name for the gamma isomer of hexachlorocyclohexane. It has been used as a broad-spectrum insecticide for seed and soil treatment, foliar applications, tree and wood treatment, and against ectoparasites in both veterinary and human applications. Its household use included fly spray, flea and carpet moth control.

The Pesticides Act 1979 banned lindane's use as an agricultural pesticide in 1989. The Agricultural Compounds and Veterinary Medicines (ACVM) Regulations 2001 were amended in 2004 to prohibit lindane as an agricultural compound or ingredient in agricultural compounds. The ACVM (Exemptions and Prohibited Substances) Regulations 2011 revoked and replaced the ACVM Regulations 2001. All uses were prohibited when lindane was added to Schedule 2A of the HSNO Act in 2011, except for a specific exemption as a treatment for human head lice and scabies. Pharmaceutical products were formulated in New Zealand with imported lindane active ingredients, but this manufacture ceased before the expiry of the exemption on 25 August 2015 (table 13).

Table 13: History of use and controls of lindane

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
<p>Before 1989, used as a broad-spectrum insecticide.</p> <p>Its use was more generally prohibited in New Zealand in 2011, but, until 25 August 2015, it was used in human health pharmaceuticals (medicated shampoo under prescription) to control scabies and lice under an exemption.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in 2011. The listing had an exemption for use on human head lice and scabies, but this expired on 25 August 2015.</p>	<p>Registration as agricultural compounds or ingredients in agricultural compounds prohibited since September 2004 under the Agricultural Compounds and Veterinary Medicines (ACVM) Act 1997.</p>	<p>Residues in some sites resulting from historic use.</p>

Pentachlorobenzene

Pentachlorobenzene (PeCB) belongs to a group of chlorobenzenes. It was used in polychlorinated biphenyl (PCB) products, in dyestuff carriers, as a fungicide, a flame retardant and as a chemical intermediate, particularly to produce quintozene.

PeCB might still be produced unintentionally during combustion, thermal and industrial processes. It may also be present as impurities in products such as solvents or pesticides.

In 2011, the Environmental Risk Management Authority (the Environmental Protection Authority's (EPA's) predecessor) reassessed and then revoked the approval for quintozene. Reasons for the decision included that the revocation would remove an avoidable source of POPs and be consistent with New Zealand's commitment under the Convention.

No use is reported in New Zealand (table 14).

Table 14: History of use and controls of pentachlorobenzene

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
<p>No significant use in New Zealand.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.</p>	<p>Registration as agricultural compounds or ingredients in agricultural compounds prohibited from September 2004.</p>	<p>n/a</p>

Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride

Perfluorooctane sulfonic acid (PFOS) and its closely related compounds are members of the large family of per- and polyfluoroalkyl substances (PFAS). PFOS is both intentionally produced and an unintended degradation product of related chemicals. Intentional use of PFOS was widespread globally and included: the electronic and semi-conductor industry, electroplating industry, certain medical devices, firefighting foams, photo imaging, aviation hydraulic fluids, and coatings for textiles, carpets, leather, upholstery, paper and packaging, rubber, and plastics, and insect baits for control of ants and termites.

In New Zealand, PFOS was used in several of the above applications but the most dispersive use was in firefighting foams. Globally, the firefighting foams based on PFOS chemistry were only ever produced by one manufacturer (3M), and it ceased this manufacture by 2003. PFOS-based foams were prohibited in New Zealand by the HSNO Act 1996 Fire Fighting Chemicals Group Standard 2006. A submission to a public consultation process led by the then Environmental Risk Management Authority in 2006 indicated that 3M had already by then ceased importing PFOS-based firefighting foams into New Zealand.

In 2017, PFOS was found in soil and groundwater at some New Zealand air force bases and airports, likely originating from the historic use of firefighting foams (table 15).

An investigation was subsequently undertaken by EPA, to determine whether stocks of non-compliant PFOS firefighting foams were still present in New Zealand. This investigation covered all commercial airports, petroleum production and storage facilities, chemical plants, ports and local shipping. In a small number of cases, EPA identified legacy stocks of PFOS foams as still being in use. A small number of cases were also identified of contamination of equipment and foam product with residues from past use of PFOS foams.

Where PFOS foams, or high levels of PFOS contamination of foams, have been identified, operators have been required to remove this product and to decontaminate their equipment. PFOS wastes, above the current low POPs content level of 50 milligrams per kilogram, are being exported for high temperature incineration overseas, because New Zealand has no domestic facilities capable of treating these wastes. These shipments are permitted under the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

Table 15: History of use and controls of perfluorooctane sulfonic acid (PFOS)

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>Many of the known applications of PFOS products were used in New Zealand, including in firefighting foams. Firefighting foam manufactured with PFOS was the standard since the 1970s until the early 2000s in international aviation, because these foams put out liquid fuel fires quickly, thus improving safety for passengers, air crew and fire fighters.</p> <p>All known PFOS-based firefighting foams were prohibited in 2006 by the HSNO Act Fire Fighting Chemicals Group Standard, by when all relevant importation had already ceased.</p>	<p>All uses prohibited, as listed in Schedule 2A of the HSNO Act in 2011, and no exemptions were provided.</p> <p>Before listing in Schedule 2A, the HSNO Act Fire Fighting Chemicals Group Standard of 2006 prohibited all known PFOS containing foams.</p> <p>The wording of the listing under the I&E Order and Schedule 2A of the HSNO Act was updated in December 2018, to reflect the intention of the Convention more accurately. This amendment does not affect its listing status.</p>	<p>n/a</p>	<p>Investigation of non-compliant use of PFOS-containing firefighting foam was conducted in 2018-2019. Operators possessing such foams, or products contaminated with PFOS, were subject to compliance and enforcement action by EPA under the provisions of the HSNO Act. This involved requirements to prepare a compliance plan that details how the PFOS foam will be removed and disposed of, and how equipment will be cleaned to remove residues of PFOS contamination. All wastes containing PFOS above the Stockholm Convention low POPs content level of 50 milligrams per kilogram are required to be exported from New Zealand for high-temperature incineration, in accordance with provisions of the Basel Convention.</p>

Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether)

Tetrabromodiphenyl ether (tetraBDE) and pentabromodiphenyl ether (pentaBDE) are the main components of commercial pentabromodiphenyl ether (c-pentaBDE). They inhibit or suppress combustion in organic materials and, therefore, were used as additive flame retardants.

Between 90 percent and 95 percent of the use of c-pentaBDE was for the treatment of polyurethane foam². These foams were used mainly in automotive and upholstery applications, such as vehicle seats and fittings and foams used for furniture, mattresses, carpet underlay, and electronic equipment. Production of c-pentaBDE stopped around 2004. In that year, Europe and North America banned the use of c-pentaBDE and c-octaBDE. TetraBDE and pentaBDE were not manufactured in New Zealand (table 16).

² [UNEP/POPS/POPRC.6/2, 2010, Technical Review of the Implications of Recycling Commercial Pentabromodiphenyl Ether and Commercial Octabromodiphenyl Ether.](#)

Table 16: History of use and controls of tetrabromodiphenyl ether and pentabromodiphenyl ether

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
Not manufactured in New Zealand. Imported as flame retardants in, and for the manufacture of, flexible polyurethane foam (furniture, upholstery and packaging) and non-foam polyurethane in casings, building materials, furniture, textiles and packaging.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.	n/a	Management of existing articles and waste-stream management when they become waste.

4.4.2 Persistent organic pollutants added to the Convention in 2011

Endosulfan

Endosulfan, a synthetic organochlorine compound, was introduced to the market in the mid-1950s and was widely used as an agricultural insecticide.

In New Zealand, the use, import and manufacture of endosulfan and products containing endosulfan was controlled by a reassessment decision of the EPA under the Hazardous Substances and New Organisms Act 1996 (HSNO Act), which came into effect on 16 January 2009. In line with Article 3(4) of the Stockholm Convention, the reassessment prohibited any further use, importation or manufacture of endosulfan and revoked all existing approvals by 16 January 2010.

The reassessment decision was entrenched in New Zealand legislation in 2011 through its listing as a persistent organic pollutant under the HSNO Act, and regulations were amended to prohibit the import and export of endosulfan except as permitted in the Stockholm Convention and in compliance with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention).

Registrations for endosulfan-based products under the Agricultural Compounds and Veterinary Medicines Act 1997 were also revoked in January 2009 and prohibited in 2011.

Table 17: History of use and controls of Endosulfan

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
<p>Endosulfan was imported into New Zealand and used from 1963 to 2009 as an insecticide.</p> <p>Endosulfan has never been manufactured in New Zealand.</p> <p>Four products using emulsifiable concentrate formulations containing 350 g/l endosulfan were approved and available in New Zealand in 2009.</p> <p>No endosulfan formulations were marketed for domestic use and aerial application of endosulfan did not take place in New Zealand.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in 2011.</p>	<p>Registration of endosulfan as an agricultural compound or as an ingredient in agricultural compounds is prohibited under the Agricultural Compounds and Veterinary Medicines (ACVM) Act 1997.</p>	<p>Residues in some sites resulting from historic use.</p>

4.4.3 Persistent organic pollutants added to the Convention in 2013

Hexabromocyclododecane

The main uses of hexabromocyclododecane (HBCD) globally were as a flame-retardant additive in expanded polystyrene (EPS) and extruded polystyrene (XPS), while its use in textile back-coating applications and electric and electronic appliances was smaller. EPS and XPS are used in insulation for buildings and refrigerated trucks and containers. HBCD provides fire protection to EPS and XPS during the service life of these products in buildings, vehicles, and other materials, as well as protection while stored. Its production decreased after the listing and raw material suppliers transitioned to non-HBCD-containing alternative flame retardants in EPS and XPS, as well as in other applications.

New Zealand made a notification of non-acceptance in 2014, under Article 22(4) of the Convention, relating to the listing of HBCD because of its continued use as a flame retardant in polystyrene products, principally EPS. The continued use was because of the unavailability in New Zealand of sufficient and reliable supplies of EPS containing an alternative flame retardant at that time. Because of the small size of most EPS product producers in New Zealand, and the range of products they produce, accepting the listing and registering for the specific exemption provided for EPS and XPS used in buildings was impractical.

MfE and EPA worked with Plastics New Zealand, which represented the EPS product manufacturers, to establish a voluntary industry accord (the Accord) whereby industry undertook to phase out all use of HBCD-flame-retarded EPS by 1 January 2017, in place of an immediate acceptance of the listing. From this date, it was intended that all obligations of the listing would be met, but without the need to register for the specific exemption. In this way, all use of HBCD-containing EPS could cease in New Zealand almost three years earlier than would be required if the listing was initially accepted with the five-year exemption period.

Industry was able to meet the terms of the Accord, and all imports of HBCD-containing EPS ceased before the end of 2016. Consequently, the notification of non-acceptance was withdrawn in December 2016, when this chemical was listed in Schedule 2A of the HSNO Act 1996. An articles in use notification was sent to the Convention Secretariat, to allow the continued use of existing articles containing HBCD manufactured before 1 January 2017 (table 18).

Table 18: History of use and controls of hexabromocyclododecane (HBCD)

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
HBCD was never manufactured in New Zealand and no records exist of it being imported as a chemical. It was imported incorporated in polystyrene resin for manufacture into expanded polystyrene (EPS) foam packaging and in various EPS construction products, and in manufactured EPS and extruded polystyrene products from the 1990s until 2016.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2016 with allowance for continued use of articles in use manufactured before 1 January 2017. Previously was approved provided it was used in accordance with relevant group standard.	n/a	Management of existing articles and waste disposal, when those articles become waste.

It was estimated in a 2013 study that an average of 4800 tonnes per year of HBCD-containing EPS was used in New Zealand during 2004–10. This represented an annual usage of between 24 tonnes and 48 tonnes of HBCD (based on a content in EPS of between 0.5 percent and 1 percent). An additional 5 tonnes to 10 tonnes per year of HBCD was estimated to be imported in sheets of XPS over the same period.³

No evidence was found that any HBCD was being used in coating of textiles made in New Zealand, although it may have been present in imported textiles.

The 2013 study also presented a simple ‘model’ of annual EPS production rates and annual HBCD-containing wastes arising over time (see figure 2).⁴ The model was based on several assumptions.

- Widespread use of EPS construction products started in the mid-1990s, and the production rate had doubled by 2010.
- All production of EPS construction materials containing HBCD would cease in 2018 (this was taken to be the end of the Convention-specific exemption period, but, under the Accord discussed above, was able to be brought back to the end of 2016).
- Most of the construction products are expected to have a usable life of up to 50 years, although some will be taken out of service well before that time because of building modifications and demolition.

³ Environmental Protection Authority, 2013, Graham B. 2013. *Lifecycle analysis of the brominated flame retardant hexabromocyclododecane (HBCD) in New Zealand.*

⁴ Environmental Protection Authority, 2013, Graham B. 2013. *Lifecycle analysis of the brominated flame retardant hexabromocyclododecane (HBCD) in New Zealand.*

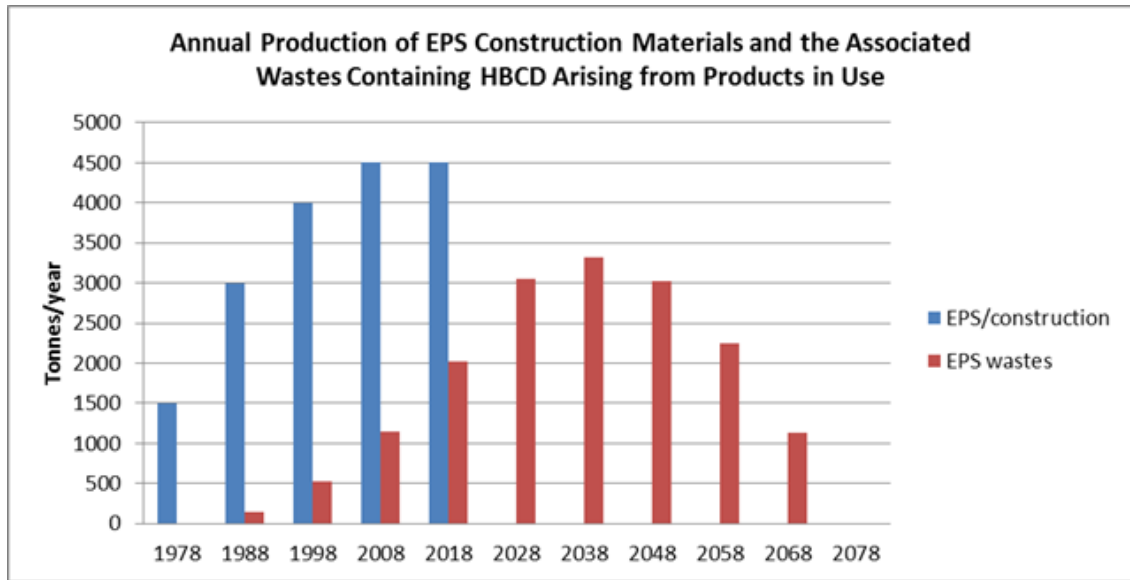
- The following waste generation rates were used to produce the waste plots: 10 percent of the construction products were assumed to be taken out of service after 10 years, followed by a further 15 percent at 20 years, 20 percent at 30 years, 25 percent at 40 years and 25 percent at 50 years.

The model was based on the annual manufacturing quantities for EPS construction products (average 4400 tonnes per year), because this is the main category for HBCD use, but it could be considered there would be an additional 10 percent of HBCD-containing EPS used in packaging. Also, the annual imports of XPS sheets may contribute an additional 15 percent to the total quantities of flame retarded polystyrene.

Although the model is intended to be purely indicative, the main points are:

- in 2018, the total quantities of wastes arising from the use of HBCD-containing EPS in construction products will be about 2000 tonnes per year, and the total quantities of HBCD-containing wastes will be about 2500 tonnes per year (assuming an additional 25 percent contribution from flame retardant packaging wastes and imported XPS products)
- by 2038, the waste quantities will increase to about 3300 tonnes per year of EPS construction products, plus an additional 1125 tonnes per year of other HBCD-containing wastes
- by 2017, there is no significant production of HBCD-containing wastes due to a gradually decline of annual waste quantities.

Figure 2: Simple model of expanded polystyrene construction product manufacturing in New Zealand, and the associated hexabromocyclododecane-containing wastes arising over time



Source: Graham, 2013

4.4.4 Persistent organic pollutants added to the Convention in 2015

Pentachlorophenol

Pentachlorophenol (PCP) and its salts were used globally as a biocide, pesticide, disinfectant, defoliant, anti-sapstain agent, anti-microbial agent, and wood preservative in the agriculture and forestry sectors (for wooden utility poles and railway sleepers and trays used in mushroom farming).

In New Zealand, PCP salts were widely used as an anti-sapstain fungicide on freshly sawn timber. Timber was either lightly sprayed or dipped in a PCP solution (table 19).

PCP was also used at a limited number of sites in a mixture with diesel oil in the pressure treatment of poles and sleepers as a timber preservative. In addition, limited use of sodium PCP was made in the 1960s and 1970s for the preservation of building timbers. New Zealand set up special support services in 2010 for former sawmill workers exposed to PCP (see more in [chapter 7](#)).

The use of PCP as an anti-sapstain chemical for timber and as a preservative ended in 1988. In 1991, PCP was deregistered as a pesticide by the New Zealand Pesticides Board. In 2008, it was reassessed under the HSNO Act 1996, and approval for all uses was revoked.

Records of PCP use in New Zealand are incomplete. However, for the 40 years from 1950, around 5500 tonnes to 6000 tonnes of PCP were imported and used in the timber industry. At the height of its use during the 1970s, nearly 200 tonnes per year were used for anti-sapstain treatment of green timber and 100 tonnes per year for preservative treatment.⁵

PCP-treated timber is still in use, notably in some poles used with power or telephone lines. Total stock is not known, and alternatives, such as concrete and chromated-copper-arsenate treated timber, are now used for poles and railway sleepers.

In 2016, New Zealand notified the Convention Secretariat of existing PCP-treated timber utility poles, cross-arms and railway sleepers as articles in use.

Table 19: History of use and controls of pentachlorophenol

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>Previously used as an herbicide, insecticide, fungicide, algaecide, disinfectant and in antifouling paint. It was used as a timber treatment product from the 1950s to 1980s.</p> <p>Use as a timber preservative and timber anti-sapstain treatment in New Zealand ceased in 1988. Its pesticide registration ceased in 1991, and approval of all other uses was revoked in 2008.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in 2016.</p>	<p>Deregistered in New Zealand by the (then) Pesticides Board in 1991.</p>	<p>Management of existing articles in use, and environmentally sound management of these at end of their current use when they become waste. Example of known use includes existing railway sleepers (ties) and power poles. See case study about contaminated sites in chapter 6.</p>

⁵ Tonkin and Taylor Ltd and SPHERE. 2008. *Assessment of Dioxin Contamination at Sawmill Sites. Report for Ministry for the Environment*. Wellington: Ministry for the Environment.

Hexachlorobutadiene

Hexachlorobutadiene (HCBD) is a halogenated aliphatic compound, created mainly as a by-product in the manufacture of chlorinated aliphatic compounds. It is most commonly used as a solvent for other chlorine-containing compounds.

HCBD is no longer intentionally produced, and alternatives are available. HCBD was not produced or significantly used in New Zealand (table 20).

Table 20: History of use and controls of hexachlorobutadiene

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
Never produced or used significantly in New Zealand.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2016. No approval for use before the listing in Schedule 2A.	No record in Environmental Protection Authority databases of it being present as a component in products in New Zealand.	No known issues.

Polychlorinated naphthalenes

Commercial polychlorinated naphthalenes (PCNs) are mixtures of up to 75 chlorinated naphthalene congeners plus by-products. Production of PCNs for high-volume uses started around 1910 in both Europe and the United States of America. PCNs make effective insulating coatings for electrical wires. Some were used as wood preservatives, as rubber and plastic additives, for capacitor dielectrics, and in lubricants. They are also unintentionally generated during high-temperature industrial processes in the presence of chlorine, including release as by-products of waste incineration.

No information is available on historic uses of PCNs in New Zealand (table 21). However, based on overseas information, the global production of PCNs stopped in the 1970s and 1980s, which indicates that PCNs are likely to have been substituted by other chemicals.

Table 21: History of use and controls of polychlorinated naphthalenes

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
Never produced or used significantly in New Zealand.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2016. No approval for use before the listing in Schedule 2A.	No record in Environmental Protection Authority databases of it being present as a component in products in New Zealand.	No known issue.

4.4.5 Persistent organic pollutants added to the Convention in 2017

Decabromodiphenyl ether

Like other BDEs, the commercial mixture of decabromodiphenyl ether (c-decaBDE) was used mainly as an additive flame retardant. Its consumption peaked in the early 2000s. Available production data indicates about 75 percent of all world production of BDEs was c-decaBDE.

Today, c-decaBDE is manufactured in only a few countries. Some production exemptions are still in place for some Parties. Total production of c-decaBDE from 1970 to 2005 was between 1.1 million tonnes to 1.25 million tonnes⁶.

C-decaBDE has a variety of applications, including in plastics, textiles, adhesives, sealants, coatings and inks. C-decaBDE-containing plastics are used in electrical and electronic equipment, wires and cables, pipes, and carpets. In textiles, c-decaBDE was used mainly in upholstery, window blinds, curtains and mattresses for public and domestic buildings, and in the transportation sector. The amount of c-decaBDE used in plastics and textiles globally varies, but up to about 90 percent of c-decaBDE ends up in plastic and plastics used in electronics, while the remainder is used in coated textiles, upholstered furniture and mattresses.

Several non-POP chemical alternatives are already on the market for the substitution of c-decaBDE in plastics and textiles. Furthermore, non-chemical alternatives and technical solutions, such as non-flammable materials and physical barriers, respectively, are also available.

Trade names for decaBDE include DE-83R, DE-83, Bromkal 82-ODE, Bromkal 70-5, Saytex 102E, FR1210, Flamecut 110R and FR-300-BA.

While decaBDE has been phased out globally, it is possible it is present in New Zealand in some of the existing and currently imported products, including older cars and electronic equipment. Therefore, New Zealand notified the Convention Secretariat of existing articles in use containing decaBDE and registered specific exemptions for parts for use in vehicles, and aircraft and aircraft parts under Article 4 of the Convention. This means New Zealand can continue to use decaBDE for a particular purpose (table 22).

Figure 1 contains estimated quantities of BDEs in various sources of the New Zealand environment between 1978 and 2010.

Table 22: History of use and controls of commercial mixture decabromodiphenyl ether (c-decaBDE)

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>Never produced in New Zealand.</p> <p>Included as a component in products imported from other countries. Products include plastics in vehicles, electrical equipment and textiles.</p> <p>Limited import of flame retardant masterbatches containing decaBDE took place until 2017.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act from 18 December 2018, with specific exemptions for:</p> <ul style="list-style-type: none"> parts for use in vehicles specified in paragraph 2 of Part IX of Annex A of the Convention aircraft for which type approval has been applied for before December 2018 and has been received before December 2022, and spare parts for those aircraft 	<p>n/a</p>	<p>Management of legacy and imported products, and waste disposal when those products become waste.</p>

⁶ [UNEP/POPS/POPRC.16/INF/17, 2021, Report on the review of information related to specific exemptions for decabromodiphenyl ether](#)

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
	<ul style="list-style-type: none"> and articles in use notifications for articles where decaBDE has been used as an additive in plastics (such as in electrical and electronic equipment, wires, cables and pipes), in textiles (such as in carpets, upholstery, window blinds and curtains, and mattresses) and in adhesives, sealants and coatings – present in New Zealand before 18 December 2018. <p>Before listing, it was allowed to be used as a component chemical in products, in accordance with relevant group standard.</p>		

Short-chain chlorinated paraffins

Chlorinated paraffins, including short-chain chlorinated paraffins (SCCPs), have been produced commercially since the 1930s. At present, China is the largest producer of chlorinated paraffins.

SCCP production has decreased globally as countries have established control measures. Use of SCCPs in metalworking and for fat liquoring of leather was prohibited in the EU in 2003. From 13,000 tonnes per year in 1994 (in 15 EU countries), use decreased to an estimated 530 tonnes per year in 2010 (in 27 EU countries). In 2012, use of SCCPs in the EU was further restricted to fire retardants in rubber used in conveyor belts in the mining industry and fire retardants in dam sealants. The United States of America prohibited use of SCCPs in 2013. Japanese industry voluntarily discontinued use in metalworking in 2007. In Canada, the production of chlorinated paraffins stopped in 2008, and the manufacture, use, sale, offer for sale and import of SCCPs were prohibited in 2013. See the [revised draft guidelines](#).

Main SCCP applications have been as a plasticizer in polyvinylchloride (PVC), in metal-working fluids, paints, coatings, sealants, rubber, as a fire retardant or a water repellent. They have also been used in leather production. SCCPs have been used to replace PCBs, and many uses are similar. SCCPs have, however, been reported as unsuitable for uses requiring high heat stability (eg, capacitors and transformers).

SCCPs have been used in the production of flame-resistant, water-repellent and rot-preventing textile finishes in sail cloths, industrial protective clothing and tarpaulins that could be bought by the public. The major historical use of chlorinated paraffins was in military tenting and other textile applications where fire risk must be controlled. SCCPs were applied mainly as a flame retardant for back-coating of textiles in the EU and less so for waterproofing.

In New Zealand, it is possible that existing fire-resistant clothing and equipment may contain SCCPs. Therefore, New Zealand notified the Convention Secretariat of existing articles in use containing SCCPs and reflected this in domestic law (table 23).

Table 23: History of use and controls of short-chain chlorinated paraffins

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>Never produced in New Zealand.</p> <p>Many of the applications listed above in the paragraph text have been used in New Zealand.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act from 18 December 2018, with articles in use notifications for:</p> <ul style="list-style-type: none"> articles where short-chain chlorinated paraffins (SCCPs) have been used as additives in rubber and plastic goods, in adhesives and sealants, and as water-proofing and flame-retardant agents for textiles—present in New Zealand before 18 December 2018. <p>Before listing, there was an approval for this chemical under CAS No: 85535-84-8 (trade name: Witaclor 149). In addition, some chemicals were allowed to be used as components in products under relevant group standards.</p>	n/a	Management of existing articles such as firefighting clothing and equipment, and waste disposal when they become waste.

4.4.6 Persistent organic pollutants added to the Convention in 2019

Dicofol

Dicofol is an organochlorine pesticide, used to control mites on a variety of crops. It was introduced commercially in 1955. Intended uses of dicofol cover fruits, vegetables, ornamentals, field crops, cotton, tea, and Christmas tree plantations.

Between 2000 and 2007, global production of dicofol was estimated to have been 2,700–5,500 tonnes annually. Production has declined sharply since then as countries have phased out production and usage.

There are no specific examples of critical uses given as specific exemptions in the listing Decision SC-9/11 by the Conference of the Parties. A range of chemical and non-chemical alternatives to dicofol are available and accessible. Considered technically feasible, these include more than 25 chemical pesticides, biological controls (pathogens and predators), botanical preparations (plant extracts), and agroecological practices (such as used in agroecology, organics and integrated pest management). In New Zealand, before its listing in Annex A of the Convention, there were approvals under the HSNO Act for Dicofol as an active ingredient and for a formulated product – ‘wetable powder containing 350 g/kg dicofol’. This product was subject to a control (rule) that it must not be applied in or on water.

At the time of the Annex A listing, no trade name product containing dicofol was registered on the Agricultural Compounds and Veterinary Medicines Register under the ACVM Act. This meant dicofol and its products were not being used in New Zealand at that time. The HSNO approvals were revoked once dicofol was listed as a POP on Schedule 2A of the HSNO Act.

Table 24: History of use and controls of dicofol

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
<p>Approvals for Dicofol as an active ingredient and for a formulated product, 'wetable powder containing 350 g/kg dicofol', were transferred to the HSNO Act in 2006 and 2004, respectively, from predecessor legislation.</p> <p>In 2020, there were no trade name products registered on the Agricultural Compounds and Veterinary Medicines Register under the ACVM Act meaning Dicofol was no longer being used in New Zealand at that time.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in December 2020.</p>	<p>Registration as agricultural compounds or ingredients in agricultural compounds prohibited since December 2020 under the Agricultural Compounds and Veterinary Medicines (Exemptions and Prohibited Substances) Regulations 2011.</p>	<p>Residues in some sites resulting from historic use.</p>

Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds

Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds means:

- perfluorooctanoic acid (PFOA; CAS No: 335-67-1), including any of its branched isomers
- its salts
- PFOA-related compounds which, for the purposes of the Convention, are any substances that degrade to PFOA, including any substances (including salts and polymers) having a linear or branched perfluoroheptyl group as one of the structural elements.

PFOA, its salts and PFOA-related compounds are used in a wide variety of applications and consumer products across many sectors

PFOA and its salts are, or were, most widely used as processing aids in the production of fluoroelastomers and fluoropolymers, with polytetrafluoroethylene (PTFE, Teflon), fluorinated ethylene propylene, PFA (perfluoroalkoxy alkane) and PVDF (polyvinylidene fluoride) being important fluoropolymers. Fluoropolymers are used to manufacture hoses, cables and gaskets; non-stick coatings on cookware and personal care products; medical devices and filter membranes.

PFOA is also used as a surfactant and processing aid in the photolithographic and etching processes in the manufacture of semi-conductors, in photographic film coatings, and in the textile coating industry. PFOA-related compounds, including side-chain fluorinated polymers, are used as surfactants and surface treatment agents (eg, in textiles, paper, paints, and inks). PFOA-related compounds have also been used in the manufacture of fire-fighting foam for liquid fuel vapour suppression and liquid fuel fires.

PFOA-related products provide water, grease and soil protection for textiles and related products such as outdoor clothing and carpets, and for products such as the paper of microwave popcorn bags. Releases occur from past and ongoing production, use and disposal. The main emissions of PFOA and its salts are to wastewater and as particles or aerosols. Indirect releases of PFOA occur from the biotic and abiotic (photo-) degradation or transformation of precursor PFOA-related compounds.

Steps to phase out PFOA and related substances have been widely implemented overseas.

New Zealand adopted the specific exemptions for PFOA, its salts, and PFOA-related compounds for the following:

- photographic coatings applied to films (expired 3 December 2025)
- fire-fighting foam for liquid fuel vapour suppression and liquid fuel fires (Class B fires) in installed systems, including both mobile and fixed systems, in accordance with paragraph 2 of Part X of Annex A of the Stockholm Convention (expired 3 December 2025).

New Zealand also submitted an Articles in Use Notification where PFOA, its salts and PFOA-related compounds have been in use, such as in coated textiles, papers, fluoropolymer membranes, or medical devices, in New Zealand on or before 3 December 2020 (no expiry date).

Table 25: History of use and controls of perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>The HSNO Act 1996 regulates the use of PFOA, its salts and PFOA-related compounds.</p> <p>There are no approvals under the Act for any chemicals containing (PFOA), its salts and PFOA-related compounds.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in December 2020, except for specific exemptions for:</p> <p>(a) photographic coatings applied to films</p> <p>(b) fire-fighting foam for liquid fuel vapour suppression and liquid fuel fires (Class B fires) in installed systems, including both mobile and fixed systems, in accordance with paragraph 2 of Part X of Annex A of the Stockholm Convention:</p> <p>and articles in use notifications for articles where PFOA, its salts and PFOA-related compounds have been in use, such as in coated textiles, papers, fluoropolymer membranes, or medical devices, in New Zealand on or before 3 December 2020.</p>	<p>n/a</p>	<p>Uses of fire-fighting foam in uncontained applications must have ceased by 31 December 2022 and all remaining contained uses must have ceased by 3 December 2025. Users are currently implementing these requirements which involve plans for how PFOA-containing foam will be removed from use and disposed of, and how equipment will be cleaned to remove residues of PFOA contamination. All wastes containing significant levels of PFOA contamination are required to be exported from New Zealand for high-temperature incineration, in accordance with provisions of the Basel Convention.</p>

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
			Management of existing articles in use, and environmentally sound management of these at end of their current use when they become waste.

4.4.7 Persistent organic pollutants added to the Convention in 2022

Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds

Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds means:

- perfluorohexane sulfonic acid (CAS No. 355-46-4, PFHxS), including branched isomers
- its salts
- any substance that contains the chemical moiety $C_6F_{13}SO_2^-$ as one of its structural elements and that potentially degrades to PFHxS.

Perfluorohexane sulfonic acid, its salts and PFHxS-related compounds were listed under Annex A of the Stockholm Convention in 2022, with obligations entering into force for New Zealand on 5 October 2023. PFHxS belongs to the wider group of per- and poly-fluoroalkyl substances (PFAS) and includes precursor compounds that degrade to PFHxS.

Internationally, PFHxS and related substances have been used in a range of industrial and consumer applications due to their surfactant and oil- and water-repellent properties. These include use in aqueous film-forming foams (AFFFs), stain- and soil-resistant treatments for textiles and upholstery, metal plating processes, and certain specialised polymer coatings. PFHxS is highly persistent, mobile and bioaccumulative and has a long biological half-life in humans, contributing to its global prioritisation for elimination.

Releases of PFHxS can occur during production, use and disposal of PFHxS-containing products, including historic uses of firefighting foams and degradation of precursor PFHxS-related compounds. As with other PFAS, PFHxS does not readily break down in the environment and can migrate via water, sediment, landfill leachate and wastewater pathways.

Listing PFHxS under Annex A reflects the international agreement that feasible alternatives exist and that elimination is necessary to reduce human and environmental exposure. New Zealand has prohibited the import, manufacture, and use of PFHxS, its salts and PFHxS-related compounds through their addition to Schedule 2A of the HSNO Act. No specific exemptions apply to this listing. Articles already in use that contain PFHxS may continue to be used but must be managed in accordance with requirements for environmentally sound disposal, including obligations under the Basel Convention and the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004.

New Zealand continues to support monitoring of potentially contaminated sites and ensure that PFHxS containing wastes are identified and managed appropriately. This includes work with regional councils, defence and aviation sectors, and industry to improve information on PFHxS occurrence, legacy uses and pathways, and to support compliance with Stockholm Convention obligations.

Table 26: History of use and controls of perfluorohexane sulfonic acid

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
<p>The HSNO Act 1996 regulates the use of PFHxS, its salts and PFHxS-related compounds.</p> <p>There are no approvals under the Act for any chemicals containing PFHxS, its salts and PFHxS-related compounds.</p>	Prohibited, as listed in Schedule 2A of the HSNO Act in October 2023.	N/A	Residues in some sites resulting from historic use.

4.4.8 Persistent organic pollutants added to the Convention in 2023

Dechlorane Plus

Dechlorane Plus means:

- Dechlorane Plus (CAS No. 13560-89-9)
- including its *syn*-isomer (CAS No. 135821-03-3) and its *anti*-isomer (CAS No. 135821-74-8).

Dechlorane Plus was listed under Annex A of the Stockholm Convention in 2023, with obligations entering into force for New Zealand on 26 February 2025. Dechlorane Plus is a highly chlorinated flame retardant used internationally as a replacement for older POP flame retardants such as certain brominated diphenyl ethers.

Historically, Dechlorane Plus has been used in electrical and electronic equipment, wire and cable coatings, plastic connectors, adhesives, and certain polyurethane and polymer applications where heat resistance and flame retardancy are required. It has also been used in some transportation-related components and in industrial plastics. Due to its physicochemical properties – including extreme persistence, long-range environmental transport potential, and bioaccumulation – Dechlorane Plus has become an emerging contaminant of global concern.

Environmental releases primarily occur during production, processing into polymer matrices, use of treated articles, and disposal. These releases have been observed in air, sediments, soils, dust and biota in several countries. The long-range mobility and increasing global detection of Dechlorane Plus in remote regions, including the Arctic, contributed to its evaluation and subsequent listing under the Stockholm Convention.

New Zealand has not manufactured Dechlorane Plus and there is no evidence of significant use beyond its presence in imported articles and components. In accordance with the Convention listing, New Zealand has prohibited the import, manufacture and use with specific exemptions of Dechlorane Plus through its addition to Schedule 2A of the HSNO Act.

New Zealand has also notified the Secretariat of the Stockholm Convention that articles where Dechlorane Plus has been used as an additive in adhesives, sealants, polymers, cables and wires, wire harnesses, and connectors in certain applications already in use on or before 26 February 2025 may continue to be used but must be handled and disposed of in accordance with the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 and obligations under the Basel Convention.

Table 27: History of use and controls of Dechlorane Plus

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>Not manufactured in New Zealand. Present only as a component in imported articles, including electrical and electronic equipment, wiring, cables, adhesives, plastics and polymer components. No evidence of significant domestic use beyond imported goods.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act in 2025.</p> <p>Specific exemptions for use until 25 February 2030:</p> <ul style="list-style-type: none"> • aerospace • space applications • defence applications • medical imaging and radiotherapy devices and installations. <p>Specific exemptions for use for replacement parts for, and repair of, articles where Dechlorane Plus was used in the manufacture of the following articles and may be available, until the end of the service life of the articles, or 31 December 2043, whichever comes earlier:</p> <ul style="list-style-type: none"> • aerospace • space • defence • land-based motor vehicles • stationary industrial machines for use in agriculture, forestry, and construction • marine, garden, forestry, and outdoor power equipment • instruments for analysis, measurements, control, monitoring, testing, production, and inspection (other than for medical devices or in-vitro diagnostic devices). <p>Specific exemptions for use for replacement parts for, and repair of, articles where Dechlorane Plus</p>	<p>N/A</p>	<p>Identification of imported articles that may contain Dechlorane Plus; ensuring appropriate end-of-life disposal in accordance with the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 and Basel Convention obligations.</p>

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
	<p>was originally used in the manufacture of the following articles and may be available, until the end of the service life of the articles:</p> <ul style="list-style-type: none"> • medical devices • in-vitro diagnostic devices. <p>Articles in use notifications for articles where Dechlorane Plus has been used as an additive in adhesives, sealants, polymers, cables and wires, wire harnesses, and connectors (in applications such as land-based motor vehicles, power equipment, industrial machinery, marine machinery, garden machinery, forestry machinery, medical equipment, aerospace, defence, electrical equipment, electronic equipment, air conditioning, and heat pumps) present in New Zealand on or before 26 February 2025.</p>		

Methoxychlor

Methoxychlor means any possible isomer of dimethoxydiphenyltrichloroethane or any combination thereof, for example:

- CAS No. 72-43-5
- CAS No. 30667-99-3
- CAS No. 76733-77-2
- CAS No. 255065-25-9
- CAS No. 255065-26-0
- CAS No. 59424-81-6
- CAS No. 1348358-72-4.

Methoxychlor was listed under Annex A of the Stockholm Convention in 2023, with obligations entering into force for New Zealand on 26 February 2025. Methoxychlor is an organochlorine pesticide historically used internationally as an insecticide for the control of flies, mosquitoes, cockroaches, and a range of agricultural pests. It was originally developed as a replacement for DDT due to its comparatively favourable environmental and toxicity profile at the time. However, subsequent scientific evidence demonstrated that methoxychlor is persistent, bioaccumulative, and capable of long-range environmental transport.

Internationally, methoxychlor was widely applied in agriculture, horticulture, public health programmes, and domestic pest control. Although its use has been phased out in many jurisdictions for several decades, residues continue to be detected in soils and biota due to its environmental persistence. Methoxychlor and its metabolites exhibit endocrine-disrupting properties, and long-term exposure has raised concerns about impacts on human health and ecosystems.

No significant use or production of methoxychlor has been reported in New Zealand. Methoxychlor was never manufactured domestically and was not widely registered or used as an agricultural compound. As a result, New Zealand has limited legacy contamination associated with this substance. The addition of methoxychlor to Annex A therefore aligns with New Zealand’s longstanding regulatory position that POP-like pesticides are not permitted for import, manufacture, sale or use.

Following the 2023 listing, methoxychlor was added to Schedule 2A of the HSNO Act, prohibiting its import, manufacture, and use in New Zealand. No specific exemptions apply to this listing. Articles or materials containing methoxychlor already in use are unlikely to be present in New Zealand.

Ongoing implementation work focuses primarily on ensuring that methoxychlor is captured consistently across regulatory frameworks relating to hazardous substances, contaminated sites, and waste management. In particular, methoxychlor will be included in New Zealand’s future reviews of historic pesticide contamination pathways and monitoring guidance, alongside other organochlorine pesticides listed under the Convention.

Table 28: History of use and controls of methoxychlor

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996		Ongoing implementation issues
		Other controls	
Not manufactured in New Zealand. No significant domestic use reported, with limited evidence of use as an agricultural compound.	Prohibited, as listed in Schedule 2A of the HSNO Act in 2025.	N/A	Ensuring any legacy residues at historic contaminated sites are identified and managed according to the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 and Basel Convention obligations.

UV-328

UV-328 means CAS No. 25973-55-1 and Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- and was listed under Annex A of the Stockholm Convention at the 11th meeting of the Conference of the Parties (COP-11) in May 2023, with obligations entering into force for New Zealand on 26 February 2025.

COP-11 agreed to list UV-328 for global elimination due to its persistence, bioaccumulation, toxicity, and long-range environmental transport potential. UV-328 is the first *non-halogenated* chemical ever listed as a POP under the Convention. Its listing highlights that the Convention’s mandate extends beyond just halogenated compounds and confirms that organic chemicals without halogens can still possess the hazardous, bioaccumulative and long-range transport characteristics of traditional POPs.

UV-328 is widely used as a UV absorber and stabiliser to protect materials from degradation and discoloration under sunlight. It has been used in paints and coatings, automotive finishes, printing inks, rubber products, outdoor plastics, construction materials, wood coatings, textiles, leather, and a range of consumer products including some food-contact packaging

layers. UV-328 is also used as an additive in lubricants, hydraulic fluids, automotive oils, and certain polymer systems requiring long-term UV stability.

New Zealand has not produced UV-328 but has imported articles and mixtures containing the substance. Specific use exemptions permitted under the Convention apply in New Zealand, such as parts of land-based motor vehicles, industrial coating applications for land-based motor vehicles, mechanical separators in blood collection tubes, triacetyl cellulose film in polarisers, photographic paper and certain replacement parts, such as in liquid crystal displays for specific applications.

Following its Annex A listing, UV-328 is now prohibited in New Zealand through its addition to Schedule 2A of the HSNO Act (Hazardous Substances and New Organisms Act 1996), meaning its import, manufacture and use with specific exemptions are banned.

Articles already in use may remain in service for the duration of their functional lifespan but must be managed through environmentally sound disposal processes in accordance with the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 and the Basel Convention.

Ongoing implementation work includes identifying sectors where UV-328 may still be present in imported goods (eg, automotive components, coatings, plastics and industrial fluids), supporting industry transition to safer UV stabilisers, and ensuring waste streams containing UV-328 are not recycled into new products.

Table 29: History of use and controls of UV-328

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
<p>Not manufactured in New Zealand. Present in imported articles and mixtures, including paints and coatings, plastics, rubber, automotive finishes, printing inks, construction materials, wood coatings, textiles, leather, and some food-contact packaging layers.</p>	<p>Prohibited, as listed in Schedule 2A of the HSNO Act 2025, following its Annex A listing at COP-11 in 2023.</p> <p>Specific exemptions for use until 25 February 2030:</p> <ul style="list-style-type: none"> • parts of land-based motor vehicles • industrial coating applications for land-based motor vehicles, engineering machines, and rail transportation vehicles, and heavy-duty coatings for large steel structures • mechanical separators in blood collection tubes • triacetyl cellulose (TAC) film in polarizers • photographic paper. <p>Specific exemptions for replacement parts for articles where UV-328 was used in the manufacture of those articles in the following applications, until the end of the service life of the articles</p>	<p>None identified.</p>	<p>Identifying imported articles containing UV-328; preventing recycling of UV-328-containing plastics; ensuring environmentally sound disposal in accordance with the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 and Basel Convention obligations; supporting sector transition to alternative UV stabilisers.</p>

History of use in New Zealand	Relevant controls under Hazardous Substances and New Organisms (HSNO) Act 1996	Other controls	Ongoing implementation issues
	<p>or 31 December 2043, whichever comes earlier:</p> <ul style="list-style-type: none"> • land-based motor vehicles • stationary industrial machines for use in agriculture, forestry, and construction • liquid crystal displays in instruments for analysis, measurements, control, monitoring, testing, production, and inspection (other than for medical applications). <p>Specific exemptions for replacement parts for articles where UV-328 was used in the manufacture of those articles in the following applications for medical purposes, until the end of the service life of the articles:</p> <ul style="list-style-type: none"> • liquid crystal displays in medical devices and in-vitro diagnostic devices • liquid crystal displays in instruments for analysis, measurements, control, monitoring, testing, production, and inspection. <p>Articles in use notifications for articles where UV-328 has been used as an additive in paints, coatings, sealants, adhesives, plastics and rubbers, printing inks, cooling and hydraulic liquids, lubricants, and construction materials (in applications such as land-based motor vehicles, industrial machinery, electrical equipment, electronic equipment, medical and analytical equipment, air conditioning, and heat pumps) present in New Zealand on or before 26 February 2025.</p>		

Chapter 5: New Zealand implementation of the Stockholm Convention: Part 3 Annex C persistent organic pollutants

This chapter updates New Zealand’s activities to reduce or eliminate releases of unintentionally produced persistent organic pollutants (POPs).

5.1 Convention obligations

Article 5 of the Convention requires parties to take measures to reduce or eliminate releases of unintentionally produced POPs. These are listed in Annex C of the Convention and are chemicals produced and released as unintended by-products of specific processes. The goal is to continue to minimise, and where feasible, eliminate these releases.

5.2 Annex C persistent organic pollutants

Table 30 shows the chemicals listed in Annex C of the Convention and when they entered into force in New Zealand. All Annex C chemicals are also Annex A chemicals, with the exception of polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF).

Table 30: Chemicals listed in Annex C of the Convention

Chemical	Year listed under Stockholm Convention	Date entered into force for New Zealand
Hexachlorobenzene (HCB)	2001	2004
Polychlorinated biphenyls (PCB)	2001	2004
Polychlorinated dibenzo-p-dioxins (PCDD)	2001	2004
Polychlorinated dibenzofurans (PCDF)	2001	2004
Pentachlorobenzene (PeCB)	2009	2016
Polychlorinated naphthalenes (PCNs)	2015	2016
Hexachlorobutadiene (HCBD)	2018	2018

5.3 Progress since National Implementation Plan 1

NIP1 outlines New Zealand’s Action Plan for Dioxins and Other Annex C Chemicals. The Ministry for the Environment (MfE) is responsible for the Action Plan’s implementation and oversight. In summary, the Action Plan to minimise and, where feasible, eliminate releases of unintentional POPs to air, has been compiled in accordance with the measures set out in box 1. The main activities under the Action Plan are to undertake a four-yearly New Zealand Inventory of Dioxin Emissions to Air, Land and Water, and Reservoir Sources (see section 5.3.1).

Box 1: Updated action plan for dioxins and other Annex C chemicals

- Review and update every four years the New Zealand Inventory of Dioxin Emissions to Air, Land and Water, and Reservoir Sources.
- Monitor and periodically evaluate laws and policies to manage releases of dioxins and other Annex C chemicals.
- Identify strategies to minimise releases of dioxins and other Annex C chemicals.
- Promote information where appropriate to support the above programmes.
- Report progress under the Action Plan for Dioxins and Other Annex C Chemicals every five years.
- Implement the Action Plan for Dioxins and Other Annex C Chemicals to:
 - maintain and promote the implementation schedule
 - promote the measures of the action plan
 - take account of guidance prepared by the Conference of the Parties
 - provide consideration of best available techniques/best environmental practices (BAT/BEP) requirements for any new Annex C, Part II installations
 - provide consideration of BAT/BEP requirements for all existing installations (sources) in accordance with Part II and Part III of Annex C.

MfE has:

- submitted the New Zealand Action Plan for Dioxins and Other Annex C Chemicals (as a component of the National Implementation Plan (NIP) to the Secretariat of the Stockholm Convention on Persistent Organic Pollutants (Convention Secretariat in December 2018
- reported the New Zealand Inventory of Dioxin Emissions to Air, Land and Water, and Reservoir Sources containing estimates of releases of dioxin from 49 different sources in New Zealand for the reference years of 2008, 2012, 2016 and 2020. The inventory for 2024 is currently being prepared.

5.3.1 New Zealand Inventory of Dioxin Emissions to Air, Land and Water, and Reservoir Sources

The Action Plan for Dioxins and other Annex C Chemicals includes the requirement to update the New Zealand Inventory of Dioxin Emissions to Air, Land and Water, and Reservoir Sources every four years.

The New Zealand inventory measures polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) because they are considered to constitute a sufficient basis for identifying and prioritising sources of all such substances, as well as for devising applicable control measures for all Annex C POPs and evaluating their efficacy. For ease of reference, PCDDs and PCDFs are collectively referred to as ‘dioxins’ in this NIP.

New Zealand has not developed an inventory of polychlorinated biphenyl (PCB), pentachlorobenzene (PeCB), hexachlorobenzene (HCB) or polychlorinated naphthalene (PCN) because of the complexity and cost of testing and sampling. This is in line with the guidance provided by the Convention. The New Zealand Government managed a register of exemptions to keep PCB stocks until the end of 2016 (see [chapter 3](#) for PCB phase-out). A separate inventory is not deemed necessary. HCB was used experimentally in New Zealand between 1970 and 1972. A separate inventory for this substance is not deemed necessary.

The [first inventory of dioxin emissions](#) was published in 2000 from 1998 data). Since NIP1, New Zealand has completed further inventories measuring dioxins on a regular basis. The [second inventory update](#) was published in 2011 using 2008 data, and a third update was published in 2014 using 2012 data. This was followed by a [fourth update](#), referencing the years up to 2015. The [most up-to-date report](#) was published in 2022, referencing the years from 2016 – 2020.

New Zealand is currently working on the next inventory and expects that this will be published in 2026.

The methodology for New Zealand's inventories is based on the [Standardised Toolkit for Identification and Quantification of Dioxin and Furan Releases \(the United Nations Environment Programme \(UNEP\) Toolkit\)](#).

5.3.2 Changes in the dioxin release estimates over time

The dioxin release estimates for 2012, 2016 and 2020 are summarised in table 31 below. This summary is based on nine of the toolkit major source categories, which is the summary level used for country reports under the Stockholm Convention.

As shown in the table the total release of dioxin in New Zealand for 2020 was 36.60 g TEQ (toxic equivalents). This can be compared with releases of 36.99 g TEQ in 2012 and 37.10 g TEQ in 2016. This shows that, while there was an increase in the total release of dioxin between 2012 and 2016, it was below the 2012 levels in 2020.

Dioxins are generally found in mixtures containing several kinds of dioxins and dioxin-like compounds, each having its own degree of toxicity. (To express the overall toxicity of such a mixture as a single number, the concept of 'International Toxic Equivalents' (TEQ) has been established. This metric scheme weighs the toxicity of the less toxic compounds as fractions of the toxicity of the most toxic TCDD (tetrachlorodibenzo p dioxin), one of the most potent toxic dioxins and used as a reference for all other dioxins.)

The [2020 report](#) shows that about 60 percent of New Zealand's estimated dioxin releases can be attributed to two main categories – the disposal of municipal waste in landfills and sewage treatment.

Combined with seven other categories (secondary aluminium processing, industrial wood combustion, industrial coal combustion, metal shredding, landfill fires, heating and cooking with wood, and structure fires), the nine sources comprise 87 percent of total dioxin releases of New Zealand.

We can see an increasing trend of dioxin release from New Zealand's landfill deposition, although, fortunately, at a declining rate. In contrast, a decreasing national trend is evident for secondary metal activities (such as secondary aluminium and steel production, iron foundries, and brass and bronze production) due to recent plant closures.

Sewage treatment and crematoria have shown a trend of increasing dioxin releases as their activities are based on the steadily growing population numbers of New Zealand.

Asphalt production in New Zealand also shows an increasing trend reflecting the fact that major new roads continue to be built while existing roads require maintenance, hinting again at issues based on continuous population growth.

Household heating and cooking with biomass (wood) and coal both show a gradual decline in dioxin releases as burners and stoves are slowly replaced with devices requiring alternative, more modern forms of energy such as electricity.

There are no official recommendations for 'acceptable' levels of national dioxin releases, and it is also not possible to relate the release estimates to any potential health effects. Nevertheless, important work has been implemented to lower dioxin emissions in New Zealand.

Table 31: Summary of previous and current annual dioxin release inventories 2012, 2016 and 2020 by source category

Major source categories	Annual releases (g TEQ/a)											
	Air			Water			Land			Residue		
	2012	2016	2020	2012	2016	2020	2012	2016	2020	2012	2016	2020
Waste Incineration	0.79	0.37	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.010
Ferrous and Non-Ferrous Metal Production	0.40	0.26	0.20	0.01	0.02	0.02	0.21	0.27	0.09	9.71	5.54	4.37
Heat and Power Generation	3.33	3.24	3.72	0.00	0.00	0.00	0.41	0.07	0.27	0.75	0.79	0.91
Production of Mineral Products	0.07	0.08	0.07	0.00	0.00	0.00	0.18	0.06	0.04	0.03	0.04	0.05
Transportation	0.66	0.67	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Combustion	2.44	2.60	2.75	0.00	0.00	0.00	0.78	0.86	0.48	0.00	0.00	0.00
Production of Chemicals and Consumer Goods	0.05	0.07	0.044	0.01	0.01	0.00	0.09	0.15	0.048	0.00	0.00	0.00
Miscellaneous	0.19	0.20	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Major source categories	Air			Water			Land			Residue		
	2012	2016	2020	2012	2016	2020	2012	2016	2020	2012	2016	2020
Landfills and Sewage Treatment	0.00	0.00	0.00	1.39	1.80	1.83	12.57	17.03	17.25	2.43	2.60	2.81
Totals	7.94	7.47	8.32	1.41	1.82	1.85	14.24	18.44	18.17	12.97	9.00	8.14
Totals for all release vectors	2012			2016			2020					
	36.99			37.10			36.60					

Source: Ministry for the Environment, 2020

Notable changes and developments

The most notable changes from the current Inventory are outlined below.

*Releases to air categories which had **increases** in release estimates for 2020 compared with 2016*

Compared with 2016 levels, releases from combustion of wood waste in industrial boilers have increased due to improvements in consumption estimates. There was also an increase of releases due to more unpredictable events, such as landfill fires, forest fires and vehicle fires which will, by nature, fluctuate from year to year.

Dioxin releases from metal shredding have also increased due to a rising number of shredder operators and material throughput.

In the energy sector, releases from coal-fired electricity generation have increased because more coal was burned to cover hydro electricity shortages and maintenance of the Cook Strait cable in 2020.

Already mentioned above were the increased releases from landfill deposition, sewage treatment and crematoria, all to be attributed to population increase.

Other increases are due to general improvements throughout estimates, such as dioxin releases from pet cremators (improvements in throughput estimation following a regional council survey) and releases from 2-stroke engines, which are greater following increased fuel consumption estimates in the recreational marine sector.

Lastly, increased releases from diesel engines resulting from increased diesel consumption which may be related to heavy fuel oil replacement by diesel in the marine transport industry.

*Categories which had **decreases** in release estimates for 2020 compared to 2016*

Recent plant closures and decreases in production quantities were the cause of the release reductions for secondary aluminium, copper, brass, and bronze production and iron foundries. Releases from open burning of domestic wastes have reduced due to a decrease in the estimate of the amount of waste burnt following a regional council survey. Pulp and paper sludge disposal releases have decreased due to a reduction in bleached pulp production. Releases from primary iron and steel production have decreased because a greater proportion of waste materials are being recycled through the process. The reductions for household heating and cooking with biomass (wood) reflect a decrease in the number of wood burners.

Heavy oil-fired engine release reductions follow a drop in fuel consumption of this type by the marine transport industry which may be related to international controls on sulphur emission levels. Fewer schools operating incinerators is the reason for the release drop in the wood and biomass incineration category. Lime production release reductions reflect a downward trend in lime production. Petroleum production releases have reduced because throughput of crude oil at the Marsden Point refinery reduced as COVID-19 travel restrictions impacted fuel consumption, particularly in the aviation industry, in 2020. Black liquor combustion release reductions are due to reduced kraft pulp production in 2020. Other decreases in releases are due to unforeseeable events, such as the decrease of industrial and commercial coal use due to drops in coal consumption caused by COVID-19 lock downs in 2020. Structure fires are equally unpredictable events which will vary from year to year, similar to the extent of agricultural residue burning fluctuates from year to year.

5.3.3 New Zealand initiatives leading to reductions in dioxin releases

Waste reduction strategies

Landfills are by far the greatest source of dioxins for New Zealand. As the types of waste deposited in municipal landfills are so diverse only a very general emission factor can be applied to estimate dioxin releases from this source. Where the waste total is comprised of significant volumes of inert materials such as food wastes, clean fill, and garden waste it is probable that the dioxin release is being over-estimated and reducing their volume will result in a reduction in the dioxin estimation for landfills. There are currently several government initiatives which are aimed at reducing waste volumes. See [Waste reduction work programme](#) on the MfE website.

Changes in production focus

Amid a number of plant and mill closures in recent years, Winstone Pulp International closed its [Kaioi mill operation](#) near Ohakune, in October 2024 and Oji Fibre Solutions closed its [paper recycling mill](#) in Auckland in December 2024. Oji Fibre Solutions also simplified its [Kinleith Mill operation](#) in Tokoroa in June 2025 to focus on manufacturing market pulp. Pulp bleaching is a source of dioxins, so a reduction in pulp bleaching operations will lead to a reduction of dioxin emissions.

Global and national perspectives

In 2023, the [second effectiveness evaluation of the Stockholm Convention on Persistent Organic Pollutants](#) assessed whether the Convention has achieved its objective of protecting human health and the environment from POPs and how it could work better. It found that the Convention provides an effective and dynamic framework to regulate POPs throughout their lifecycle, addressing the production, use, import, export, releases and disposal of these chemicals worldwide. Monitoring results indicate that regulations targeting POPs have succeeded in reducing levels of POPs in humans and the environment. A [review of the current state and main sources of dioxins around the world](#) was conducted in 2015.

Industrialised countries in North America, Europe and South and East Asia are generally considered the biggest producers of dioxins. For many industrialised countries, following peak dioxin emissions in the 1970s and 80s, emissions decreased after the implementation of policies of flue gas treatment, social awareness campaigns and application of strict legislative emission controls. On the other hand, in countries where non-industrial sources have been traditionally high contributors, emissions have remained constant because it is more difficult to control this type of process.

It is possible to estimate a global per capita release of 38.7 g TEQ per million people per year based on the world's dioxin release of 287 kg TEQ and its 2016 population of 7.42 billion.⁷

⁷ Population Reference Bureau. (2016). *2016 World Population Datasheet*. Population Reference Bureau.

A global [emission inventory](#) for 17 toxic PCDD/Fs congeners from 8 source sectors with a spatial resolution of 1° × 1° from 2002 to 2018 has also been developed.⁸ The results indicated that the global PCDD/Fs emissions were 36.2 in 2018 and showed that PCDD/Fs emissions decreased by 25.7 percent (12.5 kg TEQ) between 2002 and 2018, mostly occurring in upper- and lower-middle income countries. Globally, open-burning processes, waste incineration, ferrous and nonferrous metal production sectors and heat and power generation were the major source sectors of PCDD/Fs. Spatially, high PCDD/Fs emissions were mainly identified in East and South Asia, Southeast Asia, and part of Sub-Saharan Africa. It found that the declining trend of dioxin emissions over the past decades terminated from the early 2010s due to increasing significance of wildfire induced emissions in the total emission.

In comparison, we can see New Zealand's comparatively low 2020 release of 36.6 g TEQ combined with a population of 5.025 million gives a per capita value of 7.3 g TEQ per million people, which places it in line with other countries of similar population size and economic status, such as Cyprus 7.6 TEQ per million or Portugal with 6.7 TEQ per million.⁹

⁸ Song, S., Chen, K., Huang, T., Ma, J., Wang, J., Mao, X., Gao, H., Zhao, Y., & Zhou, Z. (2023). New emission inventory reveals termination of global dioxin declining trend. *Journal of hazardous materials*, 443(Pt B), 130357.

⁹ Saral, A., Gunes G., and Demir S. (2014). *Atmospheric PCDD/PCDF Emission Inventory for Turkey*. *Atmospheric Pollution Research*, 5 (1), 24 - 33.

Chapter 6: Stockpiles, waste disposal and contaminated sites

This chapter outlines measures on stockpiles and wastes relating to POPs. In the New Zealand context, these measures are addressed under three categories: stockpiles, waste disposal, and contaminated sites.

6.1 Convention obligations

Article 6 of the Stockholm Convention on Persistent Organic Pollutants (the Convention) has measures to reduce or eliminate releases from stockpiles and wastes.

Clear regulations and guidelines are in place for how to store, handle and dispose of POPs safely in the few situations where they are still present in New Zealand. The regulations and guidelines are set out in the Hazardous Substances (Storage and Disposal of POPs) Notice 2004. In February 2018, the Environmental Protection Authority (EPA) published a consolidated version of this Notice, to provide easy access to all obligations and responsibilities for affected persons, which is currently being revised with a view to having an updated version in place in 2026. See [Hazardous Substances and New Organisms Act 19916: Hazardous Substances \(Storage and Disposal of Persistent Organic Pollutants\) Notice 2004](#).

6.2 Stockpiles

6.2.1 Legacy chemicals

Once POPs are banned (or restricted) under the HSNO Act 1996, it can take time to reduce or eliminate releases from stockpiles. These POPs become known as 'legacy chemicals'. Significant efforts have been made to ensure all remaining POPs and POP-containing products are identified and disposed of appropriately.

Successful activities to remove legacy POPs from New Zealand have included a phase-out programme and destruction of polychlorinated biphenyls (PCBs) (see [chapter 3](#)), and government-funded national collection programmes for POPs used in the past (especially in agriculture).

Removal and disposal of remaining stockpiles relies largely on individuals identifying any POPs and taking the necessary action to dispose of these chemicals safely. This makes it difficult to accurately ascertain the levels of POPs still likely to be present in New Zealand. New Zealand's large farming industry means that POPs pesticides are often found on farming properties where the landowners have not realised they are present, do not know what to do with them or have been unwilling to pay for collection to ensure correct disposal. The high uptake of free collection services when these have been available, such as through the 'DDT Muster' described in [chapter 3](#), indicates a willingness to manage POPs appropriately provided removal services are accessible.

6.2.2 Agrichemicals that are persistent organic pollutants

Storage, handling and disposal of agrichemicals that are considered POPs must comply with the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004.

MfE, together with local government, has undertaken national collections of agricultural chemicals in rural New Zealand. The first stage involved removing as much as possible of the historical legacy of agrichemicals stored in rural sheds across the country, particularly POP pesticides (see the [2006 National Implementation Plan](#)). Between 2003 and 2006, MfE and 13 regional councils (out of 16) worked together to collect over 290 tonnes of unwanted agricultural chemicals, mainly from rural properties. Most chemicals collected were POPs. During this period, New Zealand safely disposed of 225 tonnes of old and unwanted agricultural chemicals. Some councils continue to manage recovery from their regions, but the approach remains inconsistent nationally.

The second stage involves an industry-led product stewardship scheme for agrichemicals and their containers. [Agrecovery](#) is a not-for-profit charitable trust, established in 2006 to address persistent 'on farm' waste issues. Agrecovery provides New Zealand farmers and growers with nationwide programmes for container recycling, drum recovery and the collection of unwanted or expired chemicals (termed residual agrichemicals). Agrecovery Containers and Chemicals are [accredited Product Stewardship Schemes under](#) the Waste Minimisation Act 2008.

The scheme has operated for 20 years as a voluntary model where producers of agrichemicals choose to participate and pay scheme fees voluntarily. In December 2025, the Government announced the transition to a regulated scheme, where all producers of in-scope products will be required to sell their products in accordance with the accredited scheme, which includes contributing to its operating costs through regulated fees. Subject to final decisions on regulations, the new scheme, called [The Rural Recycling Scheme](#), is likely to be operating in 2027.

The new regulated scheme will take back triple-rinsed containers, and any residual agrichemicals in their containers. Residual agrichemicals that cannot be identified, will not qualify for the regulated scheme take-back service and will need to utilise a user-pays collection service (user pays will support the identification and appropriate management).

6.3 Waste

6.3.1 How persistent organic pollutant wastes are handled in New Zealand

POP wastes must be exported for destruction if they cannot be destroyed domestically. The disposal of POPs must comply with the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 under the HSNO Act 1996.

New Zealand must also comply with the requirements for the environmentally sound management of POP wastes set out in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Basel Convention has been implemented into domestic legislation primarily through the I&E Order. This Order requires permits from the EPA to import or export waste containing POPs.

New Zealand also implements its obligations under the [Waigani Convention](#) (a regional agreement under the Basel Convention that ensures hazardous waste cannot travel from New Zealand and Australia to another Pacific country or Antarctica) and the [OECD](#).

The Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004 states that POP wastes cannot be disposed of to a landfill. Increasingly, with waste containing POPs such as flame retarded plastic waste and hexabromocyclododecane- (HBCD-) containing polystyrene, the management of POP disposal is much more problematic (see 6.3.3 Electronic waste).

In 2022, Channel Infrastructure NZ (formerly the New Zealand Refining Company) was fined \$169,000 after PFAS-containing firefighting foam banned from use in training exercises was used multiple times at Marsden Point Oil Refinery, with foam ending up polluting the Whangārei Harbour.

This was in direct breach of the provision in the New Zealand Fire Fighting Chemicals Group Standard which implements paragraph 2(b) of Part X of Annex A of the Stockholm Convention relating to the listing of PFOA, its salts and PFOA-related compounds.

The Environmental Protection Authority laid seven charges against the company under the Hazardous Substances and New Organisms Act (HSNO Act) and a further seven charges under the Resource Management Act.

6.3.2 Per- and poly-fluoroalkyl substances waste

Firefighting foams contaminated with per- and poly-fluoroalkyl substances (PFAS) identified through the [All of Government National PFAS Programme's](#) investigations are being exported for destruction by high temperature incineration in accordance with the Basel Convention.

6.3.3 Electronic waste

The [Global E-waste Monitor 2024 report](#) commissioned by the International Telecommunication Union (ITU) and United Nations Institute for Training and Research (UNITAR) estimates that New Zealand generates 100,000 tonnes of e-waste per year. E-waste is likely to contain brominated flame retardants (BFR). While many distinct types of BFRs exist, several are specifically listed as POPs under the Convention. These are the BDEs: tetrabromodiphenyl ether (tetraBDE), pentabromodiphenyl ether (pentaBDE), hexabromodiphenyl ether (hexaBDE), heptabromodiphenyl ether (heptaBDE) and decabromodiphenyl ether (decaBDE), Dechlorane Plus and HBCD.

On 20 December 2016, New Zealand issued notification of articles in use under the Convention for tetraBDE, pentaBDE, hexaBDE, heptaBDE and HBCD. The notification of articles in use states that, while manufacture, import and use of these POPs have been prohibited since August 2011, and December 2016 for HBCD, it is likely some articles containing the POPs remain in use. New Zealand made a similar articles in use notification for decaBDE in December 2018, and for Dechlorane Plus in February 2025.

In July 2020, Government declared six product types, including electrical and electronic waste (e-waste), to be 'priority products' under the Waste Minimisation Act 2008. This declaration means that a product stewardship scheme for these products must be developed. Two industry-led scheme design projects have been completed: one for large batteries (such as

those used in electric vehicles) and another covering all other e-waste products. Find out more about [regulated product stewardship](#) on the Ministry for the Environment's (MfE) website.

In 2025 New Zealand implemented the agreement made at the COP under the Basel Convention to require prior approval of all e-waste imports and exports. This means permits are now also required from the EPA for the import and export of non-hazardous e-waste.

MfE has commissioned the following studies on BFRs in New Zealand:

- *Brominated flame-retardant research: A cost-benefit analysis of sorting options for e-waste plastics (2013)* (a summary of this study is given in box 2)
- *Brominated flame retardant research: A pilot study of e-waste plastic sorting in New Zealand (2013)*
- *Investigation of brominated flame retardants present in articles being used, recycled and disposed of in New Zealand (2010)* (a summary of this study is given in box 3)
- *Pilot study of brominated flame retardants in waste electrical and electronic equipment (WEEE) 2011.*

Box 2: Brominated flame-retardant research: A cost-benefit analysis of sorting options for e-waste plastics

This report provides validation for MfE's guidance on managing waste that may contain brominated flame retardant (BFR).

The analysis concluded that handheld scanning options to sort BFR-containing products from other recycling is expensive, lacks sufficiently compelling benefits and has operational and practical complexities that cast doubt on its feasibility.

A visual persistent organic pollutant (POP)—Bromodiphenyl ether (BDE) detection and visual BFR option were also considered. The POP—BDE option was considered likely to recover more items for recycling; however, the BFR option would give MfE more certainty that current and future domestic and international obligations would be met for ensuring safe disposal of BFRs.

The MfE-issued guidance reflects the need for certainty and ensures no item can be sent for recycling unless there is certainty it does not contain BFR.

Box 3: Investigation of brominated flame retardants present in articles being used, recycled and disposed of in New Zealand

The study's purpose was to help MfE determine whether it was feasible and practicable to meet Article 6 obligations under the Stockholm Convention in respect of the disposal of waste containing pentabromodiphenyl ether (pentaBDE) and octabromodiphenyl ether (octaBDE).

Interviews with industry indicated that New Zealand was likely to have significantly lower levels of pentaBDE and octaBDE in existing, imported and exported products than the European Union and North America. This is due to the historical absence of regulations requiring household goods to contain flame retardants in New Zealand manufactured goods.

Discussions with industry suggested the main source of pentaBDE and octaBDE in existing products has come from imported finished consumer products, from polymer resin used in the manufacture of New Zealand products, and in chemical compounds from production of polymer products for specific applications.

Testing showed that only very low levels of BDEs were present in the leachate of three landfills tested. Landfilling in secure landfills is therefore considered as a potential option to dispose of BDE-containing polymers and plastics in an environmentally sound way. However, the study concluded that this should be more widely validated.

6.4 Contaminated land management

Managing land contaminated by POPs is part of managing contaminated land in general. Past use of hazardous substances in industry, agriculture and horticulture has left a legacy of soil contamination in New Zealand. Contaminated sites are commonly associated with past activities such as:

- manufacture and use of pesticides – this has resulted in contamination at locations where pesticides were manufactured as well as the wider contamination associated with use of the chemicals (eg, agrichemical sprays, including the broadacre spreading of DDT to control pests in grazing land across New Zealand)
- timber treatment – pentachlorophenol (PCP) is a POP listed under the Convention that was used routinely at most sawmills and timber treatment plants from the 1950s until 1988, when its use ceased
- sheep dipping – use of DDT, dieldrin, arsenic and other chemicals to treat parasites on sheep
- use of fluorinated aqueous film-forming foams for firefighting and firefighter training
- unlined and poorly engineered landfills.

The Persistent Organic Pollutants Review Committee (POPRC), a subsidiary body of the Conference of the Parties to the Stockholm Convention, is working on POPs in stockpiles, products and articles in use and in wastes.

6.4.1 Responsibility for managing contaminated land

MfE provides national direction and guidance on contaminated land management. This includes the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS 2011) and guidelines to help investigate, assess and manage contaminated land.

Local government have functions under the Resource Management Act (sections 30 and 31) for the day-to-day management of contaminated land. Regional councils are responsible for investigating land for the purposes of identifying and monitoring contamination. They are the first point of contact for anyone who suspects their land may be contaminated. Territorial authorities are responsible for preventing or mitigating any adverse effects of the development, subdivision or use of contaminated land. The NESCS 2011 assists the territorial authorities with their contaminated land planning functions. Find out more about [contaminated land](#) on the MfE website.

6.4.2 Contaminated land regulatory framework

To help local government fulfil its functions, a broad framework is in place for managing land contamination that includes a mix of legislation, regulation, guidelines and funding arrangements. These include:

- [Resource Management Act 1991](#)
- [Resource Management \(National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health\) Regulations 2011](#)
- [contaminated land management guidelines](#)
- [Health and Safety at Work Act 2015](#)
- [Contaminated Sites and Vulnerable Landfills Fund](#).

MfE has also compiled a list of activities and industries, the [Hazardous Activities and Industries List \(HAIL\)](#), commonly associated with contaminated land, to help identify potentially contaminated land.

Resource Management Act 1991

The RMA is the core legislation for controlling the effects of contaminated land on the environment and people. It defines contaminated land as land that has a hazardous substance in or on it that has significant adverse effects on the environment or is likely to have significant adverse effects on the environment. Environmental Guideline Values apply to a range of contaminants in soil, based on the intended land use. These contaminant guideline values are selected in line with a hierarchy, which can be found in MfE's [Contaminated land management guidance No 2: Hierarchy and application in New Zealand of environmental guideline values \(revised 2011\)](#).

Under the RMA, regional councils and territorial authorities have overlapping functions for controlling land use (eg, preventing or mitigating any adverse effects of the storage, use, disposal or transportation of hazardous substances). Regional councils are required to allocate these functions under their regional policy statements. In most cases, the function is allocated to the territorial authority, along with their other land-use control functions.

Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations (NESCS) 2011 is a set of nationally

consistent planning controls and soil contaminant values. [Guidance for users of the NESCS](#) is available on the MfE website.

The NESCS 2011 ensures that land affected by contaminants in soil is appropriately identified and assessed before it is developed and, if necessary, is remediated or the contaminants contained to make the land safe for human use. The NESCS came into effect on 1 January 2012. The standard ensures all councils follow the same planning and decision-making framework for consistency purposes.

The NESCS 2011 provides:

- a nationwide set of planning controls that direct the requirement for consent or otherwise for activities on contaminated or potentially contaminated land
- a [mandated method for determining applicable standards for contaminants in soil](#), including a national set of soil contaminant standards for 12 priority contaminants and five common land uses
- a nationwide approach to site investigations and reporting, by mandating the use of contaminated land management guidelines for investigating and reporting on contaminated or potentially contaminated land.

Contaminated land management guidelines

Guidelines are available to enable contaminated land to be assessed and managed consistently throughout New Zealand. They have been developed in partnership with regional councils. Five guidelines have been published, each covering a different aspect of contaminated land management (table 32).

Table 32: Contaminated land management guidelines (CLMGs) and description

Guidance title	Description
No. 1 – Reporting on contaminated sites in New Zealand	Details the type and amount of information required in a contaminated site report.
No. 2 – Hierarchy and application in New Zealand of environmental guideline values	Ensures the consistent selection and application of environmental guideline values.
Environmental guideline value database	Contains the guideline values discussed in CLMG 2.
No. 3 – Risk screening system	Describes the risk-screening system that provides a nationally consistent way to rank sites that are, or are suspected of being, contaminated. The purpose of ranking a site is usually so it may be prioritised for further investigation.
No. 4 – Classification and information management protocols	Suggests a nationally consistent way to classify, manage and release contaminated site information held on council registers or databases.
No. 5 – Site investigation and analysis of soils	Provides best practice for sampling and analysing soils on sites where hazardous substances are present or suspected, and guidance on the principles for interpreting the data obtained.

Industry specific guidance is also available on the investigation assessment and management of timber treatment, petroleum, gasworks, and sheep dip sites.

Health and Safety at Work Act 2015

WorkSafe New Zealand is the agency responsible for the enforcement of hazardous substances rules in workplaces. The Health and Safety at Work (Hazardous Substances) Regulations 2017 (HSWA HS Regulations) under the HSWA apply when workers are on a contaminated site or are handling soil contaminated with hazardous substances.

WorkSafe has clarified the relationship between the HSWA HS Regulations and other pieces of legislation for the governing of contaminated land. This clarification sets out that the HSWA HS Regulations do apply to hazardous waste; however, soil contaminated with hazardous substances by past work activities does not need to be managed as hazardous waste under the HSWA HS Regulations because an established framework is already in place for the management of contaminated land under the RMA.

Contaminated Sites and Vulnerable Landfills Fund

The Contaminated Sites and Vulnerable Landfills Fund (CSVLF) replaced the Contaminated Sites Remediation Fund (CSRF) in 2024, which provided NZ\$2.63 million in annual funding for the investigation and remediation of contaminated sites that pose a risk to human health and the environment. The CSVLF is a \$30 million fund which covers a wider range of remediation projects, such as the [remediation of Nelson's Tāhunanui Beach](#), where contaminated sawdust was used as fill in the 1960s. The fund is available to local government and landowners of contaminated sites through a process of application through their local government. The CSVLF helps local government to fulfil their obligations for contaminated land management under the RMA. The fund recognises the importance of cleaning up historic contaminated sites across New Zealand, including sites potentially contaminated by POPs.

MfE administers the CSVLF and assesses each application on the risks they pose to human health and the environment using a prioritisation tool.

One site which received funding from the CSRF was the Kopeopeo Canal, after elevated levels of PCP and dioxins were found in the sediments and in eels residing in the eastern section of the canal.

The Kopeopeo Canal was contaminated by stormwater discharges between the 1950s and 1980s from a former sawmill which treated timber using PCP. While unknown at the time, PCP imported into New Zealand for use in the timber processing industry also included a percentage of impurities that contained dioxins.

This case study recognises the efforts of the late Joe Harawira,¹⁰ advocating on behalf of Sawmill Workers Against Poisons (SWAP), and Te Rūnanga o Ngāti Awa tribal authority, who brought the contamination of Kopeopeo Canal to public attention and highlighted the effects on human health and the community resulting from dioxin contamination. As kaitiaki (environmental guardians), Mr Harawira and Te Rūnanga o Ngāti Awa were instrumental in achieving central and local government support to remediate the dioxin contamination and restore the ecological health of the canal.

The Kopeopeo Canal Remediation Project was established as a collaborative initiative and project partners included MfE, the Bay of Plenty Regional Council, Ngāti Awa, SWAP, and the community.

¹⁰ Mr Harawira affiliated to the Ngāti Awa and Ngāi Te Rangī tribes. He was also a long-term member of Te Herenga, EPA's national network of Māori environmental practitioners.

Case Study: Kopeopeo Canal, Bay of Plenty, North Island

The Kopeopeo Canal site was contaminated by persistent organic pollutants, PCP and dioxins. The canal underwent remediation with partial funding from the Contaminated Sites Remediation Fund. It is an example of a contaminated site going through a remediation process using the mechanisms outlined above to help with the clean up.

The Kopeopeo Canal extends from the Rangitaiki Plains to the west of state highway 30. It runs east and joins the Orini Stream and then discharges into the Whakatane River. It was built during the 1920s to convey drainage and floodwaters from low-lying farmlands in the Rangitaiki Plains into the Whakatane Estuary.

Between the 1950s and late 1980s, the canal was contaminated by stormwater discharges from a sawmill. This sawmill treated timber using pentachlorophenol (PCP) resulting in contamination.

The remediation project intended to safely remove and treat a legacy of industrial dioxin pollution. Investigations dating back to 2005 concluded that dioxin levels in the sediment at Kopeopeo Canal were elevated resulting in eel tissue concentrations of dioxin posing a risk to human health if consumed. A human health risk assessment concluded that a 5.1 kilometre section of the canal contained sediment that required remediation to ensure risks to human health could be eliminated. The sediment had built up to the point where it was affecting the canal's ability to convey floodwater. Removal of the sediment was necessary, to ensure a flood would not result in the flood banks breaking and water flowing onto surrounding land.

Investigations between December 2014 and February 2015 also showed elevated concentrations of dioxins in surface soils on stop banks located around the canal. This is likely a result of previous dredging activities.

Exposure

While the contaminated sediment remained in the Kopeopeo Canal, the main exposure route was through the food chain. Accumulation increases with every step in the food chain. This means eels within the canal may have been unsafe to eat. Further details on the level of dioxin exposure can be found on the [Bay of Plenty Regional Council website](#). PCP and its contaminant dioxin no longer flow into the canal, because PCP has not been used for timber treatment in decades and the old sawmill site that the contamination originated from was closed and decommissioned in the mid-1980s. The site has been redeveloped to commercial buildings with associated parking, and the stormwater generated on it no longer contains dioxins.

Remediation project

The Kopeopeo Canal Remediation Project was designed to be implemented in a staged approach to remove, safely store and bioremediate up to 40,000 cubic metres of sediment. The bioremediation was estimated to take 12 years, with regular monitoring indicating how the remediation was progressing.

The project's vision was: to safely remove and treat a legacy of industrial dioxin pollution, thereby restoring the mauri (life force, vital essence) of the Kopeopeo Canal and the Whakatane River and developing their full potential to contribute to the well-being of tangata whenua (indigenous people), the community and visitors for generations to come.

The project intended to enhance the natural degradation process that breaks down contaminants. In this specific project, a combination of fungi, bacteria and plants were used to help speed up the natural degradation of the dioxins.

Bioremediation was chosen as the treatment method because the concentration levels were lower than those commonly found on industrial or manufacturing sites and there were no time constraints requiring a faster process.

The decision to remove the sediment was necessary to address the issue of the sediment build-up affecting the canal's ability to convey floodwater. The decision was made to bioremediate the sediment rather than take it to a landfill. One factor in this decision was that the dioxin in the dewatered sediment could only go to two specific landfills, both a considerable distance from the canal. In making this decision, the council considered that the potential costs and environmental, social, and cultural effects of transporting the contaminated sediment long distances were too high, and that ex-situ bioremediation was the most sustainable option. The long distances also increased the risk of spilling the sediment as, a result of an accident. Cultural beliefs were also considered. One iwi strongly opposed the removal of the material from the rohe (tribal area) and preferred the process of 'healing the land' occurred locally.

During the process, sediment was dredged from the canal, placed into geotubes and kept within fully enclosed 'containment cells'. The cells were made of earth bunds lined with a high-density polyethylene (HDPE) liner that eliminates sediment-bound contaminants from moving into the surrounding soil or groundwater. Sediment was left in place at the containment sites following treatment. The final land use for each site containing the sediment will be determined by the treatment level achieved and other site-specific controls put in place.

The sediment had to be removed to ensure an extreme weather event, such as a flood, did not cause the canal to breach flood banks and affect surrounding land.

Handling of the sediment

Nearly five kilometres of canal was remediated. The sediment was removed using cutter-suction dredging and geotube dewatering. The technique involves removing the sediment using a mechanical cutter head directly next to a suction intake. As the sediment is disturbed, the suction pump draws it into a pipeline and transfers it to the containment site. At the containment site, the water—sediment slurry is dosed with commonly used chemicals, called flocculants, which separate the solids from the water. The separation occurs in the pipeline before being pumped into geotubes. These tubes allow the water out but keep the sediment in. The discharged water (filtrate) collects in the base of the HDPE-lined containment site before it is tested and discharged back into the canal.

The cutter-suction dredge method eliminates most risks associated with potential spillages of contaminated material and dust generation. This is because sediment is transferred from the canal directly to the containment sites via a pipeline. While technical assessments carried out indicated little to no risk of air-quality effects, the consent holder kept air-quality monitoring in the consent, to provide peace of mind to surrounding residents and the general community during the works. This was a condition of the consent, and ongoing monitoring and reporting of air quality will ensure compliance.

The driver for the remediation works was to mitigate risks to human health through the consumption of dioxin contaminated eels harvested from Kopeopeo Canal. The remedial area was successfully remediated to the extent practicable and to the remedial criteria standard. The containment of dredged sediment from the canal has provided for long-term bioremediation of the contaminated sediment. Ongoing monitoring of eels will evaluate exposure and uptake of residual sediment dioxin concentrations within the eel population once it re-establishes within Kopeopeo Canal.

Hazardous Activities and Industries List

The HAIL is a compilation of activities and industries known to have caused land contamination resulting from hazardous substance use, storage or disposal. The HAIL's purpose is to help regional councils identify contaminated or potentially contaminated sites for inclusion on local government land-use registers.

Under the NESCS, land where an activity or industry on the HAIL has been, is or is more likely than not to have been, undertaken on the land may become a *piece of land* subject to the NESCS when an activity listed in the NESCS is proposed.

6.4.3 Per- and poly-fluoroalkyl substances contaminated sites

New Zealand supports the Heads of EPA Australia and New Zealand 2025 National Chemicals Working Group, and the current version of the [HEPA PFAS National Environmental Management Plan](#) Version 3.0 (2025). The PFAS National Environmental Management Plan (PFAS NEMP) provides guidance about the environmental management of PFAS, primarily the POPs PFAS (PFOS, PFOA, and PFHxS, and their related compounds), with a focus on preventing and managing PFAS contamination.

New Zealand government agencies have investigated sites that have used specialist firefighting foams containing PFAS. These include the Ohakea, Whenuapai and Woodbourne Air Force bases and the Devonport Naval base. Local government is also leading investigations, with the support of central government, into soil and surface water contamination at non-Crown-owned sites including airports, petrochemical storage sites and a privately owned fire training area.

The Government contributed \$10.88 million to a rural water scheme for the Ōhakea area to provide safe drinking and stock water for the community. Unlike other areas, this rural community relied on ground and surface water for its water supply. The area is at risk from contamination and the water supply provides a long-term safeguard for the community.

The Government has also released a [guide outlining the process of gathering information to make decisions about the treatment of sites in New Zealand contaminated with PFAS](#). This document outlines the process for gathering information to make decisions about investigating, managing and remediating sites contaminated with per- and poly-fluoroalkyl substances (PFAS). It is aimed at:

- contaminated land practitioners and regulatory authorities
- owners, potential owners, or occupiers of sites where PFAS are present or suspected in the soil or water.

The guide is an overview of the duties, functions and responsibilities of councils and landowners. It supplements the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) and the Contaminated Land Management Guidelines. It also outlines potential funding streams for investigation and response, and considers stakeholder engagement.

In July 2023, the EPA released a [report](#) with results from the first large-scale survey of per- and polyfluoroalkyl substances (PFAS) in New Zealand groundwater wells. PFAS were found at very low levels in 15 of the 131 groundwater wells tested around the country – well below

New Zealand's safety limits for drinking water. The survey is part of the EPA's ongoing response to potential risks from these substances. This work includes phasing out all PFAS firefighting foams and [a ban on using any PFAS chemicals in cosmetic products](#), which will come into effect in December 2026.

Chapter 7: Effectiveness of persistent organic pollutants management

7.1 Convention obligations

Article 11 of the Convention requires parties to, within their capabilities, encourage or undertake research, development and monitoring of POPs on their:

- sources, releases and transport to the environment
- presence, levels, trends and effects on humans and the environment
- socio-economic and cultural impacts
- release reduction or elimination
- harmonised methodologies for making inventories and analytical techniques for measuring releases.

In taking this action, parties shall:

- support and further develop international programmes aimed at research, data collection and monitoring
- support efforts to strengthen national scientific and technical research capabilities
- take into account the concerns and needs of developing countries to improve their capability to participate
- undertake research towards alleviating the effects of POPs and make the results available to the public
- encourage or undertake cooperation with regard to the storage and maintenance of this generated information.

This chapter outlines a range of government POP-related research and monitoring. Studies undertaken before 2006 are covered from page 28 onwards of [New Zealand's NIP1](#) and the results have not been repeated here.

7.2 Biomonitoring

7.2.1 Concentrations of persistent organic pollutants in serum of adult New Zealanders

Background

The Centre for Public Health Research (CPHR) at Massey University completed a two-year study in 2013 for the Ministry of Health (MOH), which measured concentrations of selected

POPs in serum from a cross-section of adult New Zealanders.¹¹ Serum samples were collected from 747 randomly selected participants across a range of age groups, ethnicity, gender and geographic regions.

POPs determined in this study include polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF), polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), brominated flame retardants (BFRs) and perfluorinated compounds (PFCs).

The study was designed so the association between demographic factors and serum concentration of POPs could be assessed, and to provide a direct comparison with the New Zealand serum concentrations of POPs determined 15 years earlier.

Conclusion

The study's results show serum concentrations for chlorinated POPs (dioxins and furans, PCBs and organochlorine pesticides such as 1,1,1-trichloro-2, 2-bis (4-chlorophenyl) ethane (DDT) halved between 1997 and 2012.

New Zealanders' body burdens of PCDDs, PCDFs and PCBs are low by international comparison, while for OCPs they are similar or lower, compared with those reported for other developed countries. National and international action to reduce environmental contamination with PCDDs, PCDFs, PCBs and OCPs has resulted in a substantial reduction of chlorinated POPs in the New Zealand body burdens.

The study provided baseline data for serum concentrations of brominated and fluorinated POPs. These were detected in all samples in an order of magnitude of nanogram per gram lipid (ng/g lipid) and nanogram per millilitre serum (ng/mL) respectively, comparable to, or less than, concentrations reported for other developed countries.

Link for full details: [Chlorinated persistent organic pollutants in serum of New Zealand adults, 2011–2013 - ScienceDirect.](#)

7.2.2 Concentrations of persistent organic pollutants in the breast milk of New Zealand women

Background

MOH undertook three consecutive breast milk surveys in 1988, 1998 and 2008 that aimed to measure individual breast milk levels of POPs in New Zealand first-time mothers aged 20 to 30 years.

¹¹ 't Mannetje A, Coakley J, Borman B, Douwes J, Bates M. 2013. *Concentrations of Selected Persistent Organic Pollutants (POPs) in the Serum of New Zealanders*. Report prepared as part of a Ministry of Health contract for scientific services. CPHR Technical Report No. 34. Wellington: Centre for Public Health Research.

The [last survey](#) (2008) was conducted by Massey University's Centre for Public Health Research.¹² The survey was designed to provide time trend data for dioxins and furans, PCBs and OCPs and their metabolites, and provide baseline data for BFRs. The study followed the guidelines of the fourth World Health Organization Coordinated Survey of human breast milk for POPs.¹³

Four study areas were included, to have representation of urban and rural areas of both the North Island and South Island. Thirty-nine women aged 20 to 30 years each provided around 200 millimetres of hand expressed breast milk and completed a questionnaire. The individual breast milk samples were analysed for 7 dioxins, 10 furans, 45 PCBs, 23 OCPs and metabolites, 36 brominated diphenyl ethers (BDEs) and 4 additional BFRs, including hexabrominated biphenyl, by high-resolution gas chromatography–high-resolution mass spectrometry. Levels were expressed in picograms per gram milk lipid.

A current study by the University of Otago and the Ministry for Primary Industries (MPI) includes measurements of several POPs in breast milk of a population of women from Dunedin, New Zealand. This study is in progress and is expected to be published in late 2026.

Conclusions

Over the decade prior to 2008, the background levels of the three classes of POPs (dioxins, furans, PCBs and OCPs) in breast-feeding women aged 20 to 30 years have continued to decline. This survey reconfirms that the New Zealand levels of these three classes of POPs in breast milk are low by international standards.

The baseline data for BFRs shows that the BDEs most abundantly present in the New Zealand breast milk samples are like those reported for other countries, and that the levels are comparable to or higher than those measured in Europe, while being lower than those reported for the United States of America and Australia.

7.3 Persistent organic pollutants in the New Zealand environment

7.3.1 Persistent organic pollutants in the food chain

New Zealand Total Diet Study

The Ministry for Primary Industries (MPI) has undertaken various studies that have included the collection of data on POPs in raw and final foods, some date back as far as 1982.

Organochlorine insecticides such as aldrin, chlordane, dieldrin, lindane, endrin, hexachlorobenzene (HCB), alpha and beta hexachlorocyclohexane, heptachlor, DDT and endosulfan have all been covered in New Zealand's total diet studies.

¹² 't Mannelje A, Douwes J, Duckett H, Brogan S, Emmerton L, Harding E, Brooks C, Harrad S, Ellison-Loschmann L, Smith A, Pearce N. 2010. *Concentrations of persistent organic pollutants in the milk of New Zealand women*. Report prepared as part of a Ministry of Health contract for scientific services. CPHR Technical Report No. 32. Wellington: Centre for Public Health Research.

¹³ World Health Organization. 2007. *Fourth WHO-Coordinated Survey of Human Milk for Persistent Organic Pollutants in Cooperation with UNEP: Guidelines for Developing a National Protocol*. Geneva, Switzerland: World Health Organization.

The New Zealand Total Diet Study (NZTDS) surveys a range of the most commonly foods eaten in a typical diet, to assess New Zealanders' exposure to certain chemicals, such as agricultural compounds, contaminants and nutrients. The study is carried out, on average, every five to seven years.

The 2016 survey tested for aldrin, chlordane, DDT, endrin, heptachlor, dicofol, HCB and endosulfan. None of these POPs, except for two, were detected at all during testing. DDT and dieldrin were detected during data collection. Analysis for organochlorine insecticides has been a critical component for the NZTDS. The presence of DDT and dieldrin in the environment, despite being banned in New Zealand, is persistent so residues are still found occasionally in food samples.

The 2024 NZTDS similarly included these POPs as well as seven PFAS congeners, including PFOA, PFOS, and PFHxS (2024 NZ Total Diet Study). New Zealand Food Safety (a unit of MPI) published quarterly results for the most recent study from 2024 – 2025 data. The final results of the study will be published in mid-2026.

Health-based guidance values (HBGVs) have been established for both DDT and dieldrin that enable the dietary exposures to be characterised. The HBGVs are 0.1 micrograms per kilogram body weight per day for dieldrin and 10 micrograms per kilogram body weight per day for DDT.

DDT

Dietary exposure to DDT has shown a consistent downward trend over time, and this continued in the 2016 data. The ongoing trend in the decrease in DDT exposure suggests any dietary risk will also continue to decrease as the compounds in the environment gradually degrade. The dietary exposure for 19- to 24-year-old males has decreased from 0.38 milligrams per kilogram body weight per day in 1974/75 to 0.008 milligrams per kilogram body weight per day in 2016. Testing showed that only three samples contained DDT residue (table 33).

Table 33: DDT contained residue in samples (milligrams per kilogram)

Sample	Mean (mg/kg)
Beef, mince	0.002
Butter	0.003
Lamb – mutton	0.003

Source: Ministry for Primary Industries, 2018b

The DDT detections are all within animal products, and this is consistent with the pattern of occurrence observed in the 2009 NZTDS and previous NZTDSs. The detections likely represent the accumulation in fatty animal tissues of DDT that still persist in New Zealand soils decades after its use were banned.

Dieldrin

Dieldrin was detected in one sample each of courgettes and pumpkins. A consistent pattern of dieldrin in cucurbit crops was also reported in previous NZTDSs. The result of 0.04 milligrams per kilogram in the pumpkin sample, however, is higher than in 2009 or 2003/04. Estimated dietary exposure to dieldrin increased in 2016, compared with the 2009 NZTDS. For infants, the estimated dietary exposure was 32 times higher in 2016 than in 2009.

However, the single result in one pumpkin accounts for most of the exposure and is the reason for the significant increase in dietary dieldrin exposure since the previous NZTDS.

Link for full details: www.mpi.govt.nz/food-safety/food-monitoring-and-surveillance/new-zealand-total-diet-study.

Per- and poly-fluoroalkyl substances survey

As a follow-on activity to the 2016 NZTDS, 12 food groups (96 samples) were analysed for 29 per- and poly-fluoroalkyl substances (PFAS).¹⁴ No detections were reported for perfluorooctane sulfonic acid (PFOS) or perfluorooctanoic acid (PFOA) in any of the foods analysed. Only a single detection of any PFAS compound (perfluorohexanoic acid) was reported in the analysed foods samples. Exposure estimates for PFOS and PFOA, assuming presence up to the analytical limit of quantification, fell below the Australian and New Zealand health-based guidance values.

Link for full details: [Per- and Poly- Fluorinated Alkyl Substances \(PFAS\) in selected New Zealand foods – Survey report](#).

Ministry for Primary Industries: Report on the targeted surveillance of milk from animals potentially exposed to petrochemical mining wastes

In 2014, MPI conducted targeted surveillance of milk from 20 dairy farms, to assess the safety of milk from animals potentially exposed to farmland used for the bioremediation of solid wastes from petrochemical mining.¹⁵ This included testing for polybrominated diphenyl ethers (PBDEs), the most prevalent of which is decabromodiphenyl ether (commercial mixture, c-decaBDE), which was listed under the Convention in 2017. Only two samples tested positive for trace levels of PBDEs (one from a farm with a landfill and one from a farm that has had disposal of wastes using the 'mix-bury-cover' method). One milk sample contained 2.34 nanograms per kilogram of BDE#99 and the other contained 2.04 nanograms per kilogram of BDE#99, 3.73 nanograms per kilogram of BDE#47 and 0.466 nanograms per kilogram of BDE#100. The levels reported from the land farming sites are within the ranges reported in other countries.

The report concluded only very low levels of some of the chemical compounds that were tested for were found, and these did not present a risk to consumers.

Link for full details: <https://www.mpi.govt.nz/dmsdocument/4391/direct>.

Monitoring Programmes

The [National Chemical Contaminants Programme](#) in dairy products and raw milk and the [National Chemical Residues Programme](#) in animal products excluding dairy are authorised under New Zealand legislation (Animal Product Act 1999) in the [Animal Products Notice](#):

¹⁴ Andrew P. 2018. *Per- and poly- fluorinated alkyl substances (PFAS) in selected New Zealand foods*. New Zealand Food Safety Technical Report No: 2018/07. Wellington: Ministry for Primary Industries.

¹⁵ Ministry for Primary Industries. 2014. *Report on the targeted surveillance of milk from animals potentially exposed to petrochemical mining wastes*. Wellington: Ministry for Primary Industries.

Sampling Regimes for Monitoring. These programmes verify the contaminant control system and enable MPI to assess the effectiveness of the New Zealand regulatory programme in preventing the risk of contamination.

The **National Chemical Contaminants Programme report** provides results for dioxins, dioxin-like PCBs and some non-dioxin like PCBs (indicator PCBs) in a range of dairy products and milk, sampled over the 2014/15 – 2023/24 dairy seasons. The samples came from a range of raw milk samples and samples of dairy products manufactured in New Zealand, including anhydrous milk fat, butter, cheese and cream. The results support the conclusion that contaminant levels in New Zealand dairy products are well below any levels of concern.

New Zealand is an isolated country and not heavily industrialised. This means the risk of dioxins or PCBs entering the milk supply is low. Although historical surveys have shown this, dairy products and milk are still monitored on an annual basis. The NCCP monitoring programme ensures an elevated level of confidence can be maintained in the safety and suitability of New Zealand's dairy products. Results do not exceed the most appropriate science-based overseas standards for dioxins and PCBs. Although historical surveys have shown this, dairy products and milk are still monitored annually. Test results were compared to the European Union (EU) limits for dioxins and PCBs in food. These limits are outlined in the report document. None of the samples recorded detections exceeding either the EU action levels (early warning system) or EU regulatory maximum levels threshold.

This link contains all the annual reporting on raw milk and dairy products for organochlorines:
<https://www.mpi.govt.nz/food-business/dairy-products-processing-manufacture-testing-requirements/monitoring-testing-dairy-products/documents-for-nccp/>.

The National Chemical Residues Programme report provides results for dioxins, dioxin-like PCBs and some non-dioxin like PCBs (indicator PCBs) and per- and poly-fluoroalkyl substances. The samples came from farmed salmon and wild caught eels grown and processed in New Zealand. Test results were compared to the European Union (EU) limits for dioxins and PCBs and PFAS substances in food. None of the samples recorded detections exceeding either the EU action levels (early warning system) or EU regulatory maximum levels threshold. The results support the conclusion that contaminant levels in New Zealand dairy products are well below any levels of concern.

This link contains all the annual reporting on animal products for organochlorines:
<https://www.mpi.govt.nz/food-business/food-monitoring-surveillance/national-chemical-residues-programme/documents-for-national-chemical-residues-programme>.

7.3.2 Persistent organic pollutants in fresh water

In 2022, the Institute of Environmental Science and Research (ESR), a Crown research institute, coordinated the **ninth survey of pesticides in groundwater** throughout New Zealand. This survey has been completed every four years, since 1990. In total, 184 well samples were taken. Two POPs were detected – 4,4'-DDE¹⁶ and dieldrin. 4,4'-DDE was detected in one well at a concentration of 0.013 milligrams per cubic metres. This is much lower than the maximum acceptable value for drinking water (1 milligram per cubic metre). Dieldrin was detected in

¹⁶ 4,4'-DDE is a breakdown product of the banned pesticide DDT, the use of which was widespread in New Zealand agriculture from the 1940s to the 1970s.

two wells at a concentration of 0.04 milligrams per cubic metre. This equals the maximum acceptable value for drinking water (0.04 milligrams per cubic metre).

Dieldrin was widely used on New Zealand farms during the 1960s to control ectoparasites. Most farms would have had a sheep or cattle dip site during this time. Although dieldrin has not been used in New Zealand since the 1960s, its persistent nature means it can be detected in the soil where dip-site wastewater was disposed of and occasionally in the underlying groundwater. Testing will continue through the ESR survey every four years.

Link for full details: <https://www.knowledgeauckland.org.nz/media/m1ncztyh/national-survey-pesticides-in-groundwater-2022-esr-june-2023.pdf>.

7.3.3 Persistent organic pollutants in land

The Our Land 2018 report, published by MfE and Stats NZ, states that we know what kind of land contamination can happen in New Zealand and how chemicals may affect human and environmental health. However, it is not possible to report on the overall extent of land contamination.¹⁷

POPs commonly found in contaminated land are pesticides historically used for animal and timber treatments, such as DDT, dieldrin and pentachlorophenol (PCP). In 2017, PFAS and the compounds PFOS, PFOA and PFHxS, in particular, emerged as contaminants of concern for New Zealand. More information about contaminated land and PFAS contamination is given in [chapter 6](#).

7.3.4 Persistent organic pollutants in air

New Zealand is the only Organisation for Economic Co-operation and Development country without a pollutant release and tracking register. The [Our air 2024 report](#), published by MfE and Stats NZ, notes that there is a lack of understanding of air quality more generally, including localised and emerging pollutants, which includes POPs. However, the particular requirement to estimate releases of unintentional POPs (addressed under Article 5) is being undertaken at a national level. Records are kept of the quantities of the intentional POPs being collected and disposed of. In addition, New Zealand has implemented the [Resource Management \(National Environmental Standards for Air Quality\) Regulations 2004](#), which ban activities that discharge significant quantities of dioxin and other toxins into the air (see more in [chapters 1 and 5](#)).

¹⁷ Ministry for the Environment & Statistics New Zealand. 2018a. *New Zealand's Environmental Reporting Series: Our land 2018*. Retrieved from www.mfe.govt.nz and www.stats.govt.nz.

7.4 Health support services

NIP1 referenced research on the health significance to workers and former workers of past occupational exposures to dioxin. Since 2007, MOH has funded two health support services for chemically exposed populations. One service is provided for residents of Paritutu, New Plymouth, who were exposed to dioxins during the 1960s to 1980s because of an agrichemical plant operating in the area (see box 4). The second service is provided to former sawmill workers across New Zealand who handled PCP during the 1950s to 1980s (see box 5).

Box 4: Support service for people exposed to dioxin

- The Ministry of Health launched this service on 1 July 2008 for people exposed to dioxin.
- Services include:
 - information and advice for residents, health practitioners and members of the public about dioxins, dioxin exposures in New Zealand, and potential health risks
 - an annual health check-up
 - other health services: smoking cessation, physical activity and nutrition support, primary mental health care, or genetic counselling
 - serum dioxin testing in some circumstances.

People are eligible if they:

- lived or worked or went to school near the former Ivon Watkins-Dow factory in Paritutu, New Plymouth, between 1962 and 1987
- are eligible to use publicly funded health services in New Zealand (eg, New Zealand citizens).

Link for more details: <https://www.tewhatauora.govt.nz/health-services-and-programmes/environmental-health/hazardous-substances/persistent-organic-pollutants-pops/health-support-services/dioxin-health-service>.

Box 5: Special support service for former sawmill workers exposed to pentachlorophenol

The Special Support Service for Former Sawmill Workers Exposed to Pentachlorophenol (PCP) is designed to assess the health needs of workers who were exposed to PCP and other toxic chemicals at sawmills during 1950s to 1980s, and to help them access services to support wellness.

- The sawmill workers service was announced on 23 June 2010.
- Services include:
 - information and advice for doctors, other health practitioners, and former sawmill workers and their families about historical exposure to PCP and subsequent health risks
 - a free annual health check provided by a doctor
 - access to health promotion initiatives, like programmes to reduce cancer risk
 - counselling and other primary mental health services
 - help to access other social services that they are entitled to.

People are eligible if they:

- worked in a sawmill where PCP was used
- worked in jobs that used PCP chemicals or came into contact with PCP baths/tanks or if they worked with timber that was still wet from the PCP treatment process
- worked in these jobs for at least one year
- are entitled to use publicly funded health services in New Zealand (eg, New Zealand citizens).

Link for more details: <https://www.tewhātuora.govt.nz/health-services-and-programmes/environmental-health/hazardous-substances/persistent-organic-pollutants-pops/health-support-services/sawmill-workers-service>.

Chapter 8: Other Stockholm Convention obligations

8.1 Convention obligations

Previous chapters have covered New Zealand's activities to meet its obligations under Articles 3 to 8 and 11 of the Convention. This chapter covers New Zealand's activities for Articles 9, 10, 12 and 13.

The remaining articles concern the international administration of the Convention and are not considered relevant to this national implementation plan.

8.2 Information exchange

Article 9 of the Convention requires parties to facilitate or undertake information exchange relevant to:

- the reduction or elimination of the production, use and release of persistent organic pollutants (POPs)
- alternatives to POPs, including information relating to their risks and socio-economic costs.

The Ministry for the Environment is New Zealand's designated focal point for the Convention and provides and exchanges information with parties to the Convention either directly or via the Convention Secretariat.

8.3 Public and stakeholder information and awareness

New Zealand's government agencies consider the requirements of Article 10 when implementing the measures of the Convention. Article 10 (paraphrased) requires parties to promote and facilitate awareness of POPs among policy- and decision-makers, and, along with industry and professional users, to provide up-to-date information to the public as well as appropriate education and training programmes. Public participation in implementing and developing responses to the Convention is emphasised. The mechanism by which to estimate the annual quantities of POPs released or disposed of should also be considered.

Information on [Stockholm Convention on Persistent Organic Pollutants](#) is available on the MfE website. This includes links to research undertaken on POPs, such as studies on [brominated flame retardants \(BFRs\)](#) and [hexabromocyclododecane \(HBCD\)](#) (see [chapter 6](#)).

Reports relating to the monitoring of POPs in New Zealand are generally placed on the website of the agency that undertook the work.

Before seeking government approval to implement new chemical listings under the Stockholm Convention, the EPA will undertake consultation with stakeholders on domestic implementation.

8.4 Technical and financial assistance

Technical assistance

New Zealand has not provided or received technical assistance, in accordance with Article 12. However, New Zealand (MfE and EPA) undertakes environmental cooperation on POPs with other countries in several ways.

Since December 2016, MfE has attended working group meetings and conferences on Remediation for Soil and Groundwater Pollution of Asian and Pacific Region hosted by the Taiwan EPA. These meeting and conferences are held to share experiences of managing contaminated sites, including POPs contaminated sites, between the 12 member nations and to keep up to date with advances in knowledge and technologies for the investigation and remediation of contaminated land.

Financial assistance

Global Environment Facility

New Zealand meets its obligations to provide financial assistance under Article 13 of the Convention via regular contributions to the Global Environment Facility (GEF) for the implementation of multilateral environmental agreements, including the Convention. The GEF has recognised the importance of chemicals and waste.

New Zealand's annual contributions to the GEF are as follows:

- GEF-7 (2018-2022): NZD\$12,003,000
- GEF-8 (2022-2026): NZD\$23,500,000.

Funding to GEF is based on a commitment made under each replenishment round, covering multiple years. New Zealand's most recent pledge was for the eighth replenishment of GEF (GEF-8), which was a commitment of NZ\$23.5 million. Actual payments related to each commitment can be made in instalments beyond the replenishment period, depending on the encashment schedule.

United Nations Environment Programme

New Zealand contributes to the United Nations Environment Programme (UNEP). For the period 2022 to 2025 New Zealand contributed around USD\$1.4million, as follows:

- 2022: USD\$361,800
- 2023: USD\$361,800
- 2024: USD\$361,800
- 2025: USD\$361,800.

SPREP

New Zealand also contributes to the administration of the Secretariat of the Pacific Regional Environment Programme (SPREP), in accordance with its funding priorities. SPREP provides, among other things, assistance to Pacific Island developing states on implementing waste management programmes. New Zealand contributes NZ\$2.1m per year for SPREP's core budget enabling it to flexibly deliver on its strategic priorities as driven by its members across the Pacific region. New Zealand also provides a range of programme and project-based funding to SPREP.

Programme funding of \$15.2m over three years (2024–26) has enabled SPREP to support Pacific delegates from 14 Pacific Island countries at the meetings of the Conferences of the Parties (COPs) to the Basel, Rotterdam and Stockholm (BRS) conventions in 2025 in Geneva, Switzerland, coordinating PSIDS inputs and providing legal and policy advice. SPREP was also able to provide support to PSIDS finalising their positions in preparatory meetings for the BRS COPs. The funding is enabling SPREP to coordinate across MEAs, including through the Waigani Convention and plastics treaty negotiations, reinforced integrated legal and policy support for Pacific SIDS on climate, ocean, and environmental governance.

8.5 Reporting

New Zealand has submitted five national reports, in line with Article 15 of the Convention; links are listed in table 34. A national report contains information on the measures taken by a Party in implementing the Stockholm Convention. The information provided in the national reports is one of the main references to be used for the evaluation of the effectiveness of the Convention in accordance with Article 16 including the progress towards the elimination of polychlorinated biphenyls (PCBs).

Table 34: New Zealand's National Reports

Report	Link to full details
National Report 1	Submission date: 19/04/2007 http://chm.pops.int/Countries/NationalReports/FirstRoundofPartyReports/tabid/254/Default.aspx
National Report 2	Submission date: 4/11/2010 http://chm.pops.int/Countries/NationalReports/SecondRoundofPartyReports/tabid/1315/Default.aspx
National Report 3	Submission date: 29/08/2014 http://chm.pops.int/Countries/NationalReports/ThirdRoundPartyReports/tabid/4470/Default.aspx
National Report 4	Submission date: 31/08/2018 http://chm.pops.int/Countries/NationalReports/FourthRoundPartyReports/tabid/6346/Default.aspx
National Report 5	Submission date: 31/08/2022 http://chm.pops.int/Countries/Reporting/NationalReports/FifthRoundPartyReports/tabid/9026/Default.aspx

Glossary

ACVM	Agricultural Compounds and Veterinary Medicines
Alpha-HCH	Alpha hexachlorocyclohexane
Basel Convention	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
BAT/BEP	Best available techniques/best environmental practices
BDE	Bromodiphenyl ether
Beta-HCH	Beta hexachlorocyclohexane
BFRs	Brominated flame retardants
c-decaBDE	Commercial mixture decabromodiphenyl ether
c-octaBDE	Commercial octaBDE
c-pentaBDE	Commercial pentabromodiphenyl ether
Convention	Stockholm Convention on Persistent Organic Pollutants
CPHR	Centre for Public Health Research
CSRF	Contaminated Sites Remediation Fund
CSVLF	Contaminated Sites and Vulnerable Landfills Fund
Customs	New Zealand Customs Service
DDT	1,1,1-trichloro-2, 2-bis (4-chlorophenyl) ethane
DecaBDE	Decabromodiphenyl ether
EPA	Environmental Protection Authority
EPS	Expanded polystyrene
ESR	Institute of Environmental Science and Research
EU	European Union
HAIL	Hazardous Activities and Industries List
HBCD	Hexabromocyclododecane
HBGVs	Health-based guidance values
HCB	Hexachlorobenzene
HCBD	Hexachlorobutadiene
HCH	Hexachlorocyclohexane
HDPE	high-density polyethylene
HeptaBDE	Heptabromodiphenyl ether
HexaBDE	Hexabromodiphenyl ether
HSNO	Hazardous Substances and New Organisms
HSWA	Health and Safety at Work Act 2015
HSWA HS Regulations	Health and Safety at Work (Hazardous Substances) Regulations 2017
I&E Order	Imports and Exports (Restrictions) Prohibition Order (No 2) 2004
MBIE	Ministry of Business, Innovation and Employment
MfE	Ministry for the Environment

MOH	Ministry of Health
MPI	Ministry for Primary Industries
MFAT	Ministry of Foreign Affairs and Trade
NESCS	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
NCCP	National Chemical Contaminants Programme
NCRP	National Chemical Residues Programme
NIP	National Implementation Plan
NIP1	National Implementation Plan 2006
NIP2	National Implementation Plan 2018
NIP3	National Implementation Plan 2022
NZTDS	New Zealand Total Diet Study
OCPs	Organochlorine pesticides
PBDEs	Polybrominated diphenyl ethers
PCBs	Polychlorinated biphenyls
PCDDs	Polychlorinated dibenzo-p-dioxins
PCDFs	Polychlorinated dibenzofurans
PCNs	Polychlorinated naphthalenes
PCP	Pentachlorophenol
PeCB	Pentachlorobenzene
PentaBDE	Pentabromodiphenyl ether
POPs	Persistent organic pollutants
PFAS	Per- and poly-fluoroalkyl substances
PFCs	Perfluorinated compounds
PFOA	Perfluorooctanoic acid
PFHxS	Perfluorohexane sulfonic acid
PFOS	Perfluorooctane sulfonic acid
PFOS-F	Perfluorooctane sulfonyl fluoride
PVC	Polyvinylchloride
RMA	Resource Management Act 1991
SCCPs	Short-chain chlorinated paraffins
SWAP	Sawmill Workers Against Poisons
TetraBDE	Tetrabromodiphenyl ether
UNEP	United Nations Environment Programme
WMA	Waste Minimisation Act 2008
XPS	Extruded polystyrene

Relevant legislation

Animal Products Act 1999

Agricultural Compounds and Veterinary Medicines Act 1997

Agricultural Compounds and Veterinary Medicines (Exemptions and Prohibited Substances) Regulations 2011

Fire Fighting Chemicals Group Standard 2021

Food Act 2014

Hazardous Substances and New Organisms Act 1996

Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice 2004

Health and Safety at Work Act 2015

Health and Safety at Work (Hazardous Substances) Regulations 2017

Imports and Exports (Restrictions) Prohibition Order (No 2) 2004

Imports and Exports (Restrictions) Prohibition Order (No 2) 2004 Schedule 1

Joint Australia New Zealand Food Standards Code

Resource Management Act 1991

Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

Waste Minimisation Act 2008

Water Services Act 2021

Water Services (Drinking Water Standards for New Zealand) Regulations 2022

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