

Module 3

Overview of controls for managing hazardous substances in New Zealand

What

- overview of key provisions and controls on hazardous substances under the HSNO Act
- overview of key provisions and controls on hazardous substances under the RMA
- other key pieces of legislation and international agreements dealing with hazardous substances

Why

- to understand the key provisions of the HSNO Act and how it controls hazardous substances
- to understand how the RMA controls the hazardous substances
- to gain a context of other laws and New Zealand's international obligations related to hazardous substances

How

- presentation
- exercises
- group discussion



Information is pretty thin unless mixed with experience

Clarence Day

Module 3

Overview of relevant controls for managing hazardous substances in New Zealand

3.1 MODULE OVERVIEW

Module 3 outlines the types of controls that apply to hazardous substances under the HSNO Act and the RMA, and briefly addresses other pieces of legislation and international agreements that are pertinent to managing hazardous substances in New Zealand under the HSNO Act and the RMA.

This workshop manual does not cover the methodology for assessing applications and making decisions on approvals for hazardous substances, which constitutes a major part of the HSNO Act. Rather, it focuses on the controls that are attached to individual hazardous substance approvals to manage the risks of hazardous substances across their life cycle.

Other key provisions of the HSNO Act, such as compliance with and enforcement of HSNO controls will be covered in greater detail in Module 7 of this manual.



Notes

3.2 REGULATORY FRAMEWORK FOR HAZARDOUS SUBSTANCES UNDER THE HSNO ACT

3.2.1 Approvals for hazardous substances under the HSNO Act

Importation and manufacture of hazardous substances without approval is prohibited

Under the HSNO Act, the importation or manufacture of a hazardous substance without an approval is prohibited. Any substance that meets the definition of a hazardous substance under the HSNO Act therefore requires an approval.

Types of approvals

There are two ways by which the Authority approves hazardous substances under the HSNO Act:

Legally existing hazardous substances: These are substances that were notified or controlled under historical legislation, prior to the coming into force of the hazardous substance provisions of the HSNO Act (2 July 2001). These substances will be approved and transferred to the HSNO Act. This transfer process is regulated and requires public consultation. Until this process is completed, existing controls carried over from historical legislation continue to apply under the transitional provisions of the HSNO Act.

New hazardous substances: From 2 July 2001, the HSNO Act explicitly prohibits the importation or manufacture of any new hazardous substance without approval. To get an approval for a new hazardous substance, a written application needs to be made to the Authority. The Authority will then assess the application based on its standard methodology, and decide on the approval and any necessary controls to manage the hazardous substance across its life cycle.



Notes

**Reassessment of
existing approvals for
hazardous
substances**

The Act also provides for the reassessment of a legally existing hazardous substance, where the need for a re-evaluation of the associated risks and benefits is indicated. As a result of a reassessment, the Authority may decide to change the conditions placed on an approval, or, in extreme cases, completely withdraw it.

The HSNO Act specifies criteria under which a reassessment can be applied for. These include:

- the availability of significant new information about the risks presented by a particular hazardous substance or new organism
- the availability of another substance with similar or improved beneficial effects and reduced adverse effects
- a significant change in the quantity of the substance being used or how it is being used.

Process for reassessment

The reassessment of hazardous substances under the HSNO Act is a two-step process. First, the Authority must decide that there are grounds for reassessment. Secondly, once the grounds have been established, any person may make an application for the actual reassessment of the substance. This is then processed like a normal application and goes through a formal public consultation process.

To date, the Authority has formally decided that there are grounds for reassessment for three hazardous substances, including 1080 and clopyralid based herbicides.

Anyone can ask for a reassessment. However, the Act empowers the CEO of the Authority to request a reassessment, which is then paid for by the Authority. Anybody may ask the Authority to agree to sponsor a reassessment. To this end, a formal application has to be made, supported by relevant information to satisfy the criteria for a reassessment. If the Authority does not agree, then applicant has to sponsor the process, and follow the procedure in much the same way as for any new approval.

The Authority sets an annual budget for Chief Executive initiated reassessments. The substances for reassessment come from a priority list that has gone through a consultation process. However, listing is not a guarantee that reassessment will occur, as the Authority has to first decide on whether there are grounds for reassessment.

3.2.2 Overview of regulatory framework

The HSNO Act requires all substances to be managed throughout their life cycle, from manufacture or import, to end use, disposal or export, while protecting the environment, and the health and safety of people and communities.

When approving a hazardous substance, the Authority identifies and classifies the substance, and attaches controls based on a **‘toolbox’ of regulations**.

The **“Minimum Degree of Hazard” Regulations** are used to define the thresholds for the different hazardous properties, i.e., the point above which a substance is deemed to be hazardous in terms.

The **“Classification” Regulations** are used to determine a classification for a hazardous substance, with one or more classifications assigned for each hazardous property of a substance.

This classification will trigger a set of **“default controls”** which are applied to hazardous substances, and that are also described in regulations. These are divided into:

- hazardous property controls, which aim at preventing initiation of the hazard, and limiting the exposure of the environment and people to it
- pan lifecycle controls, which aim at managing hazardous substances at each point in their life cycle, such as identification and labelling, emergency management, disposal, tracking and competency of people involved in their handling

There is also a range of other controls that are independent of hazardous substance classifications.

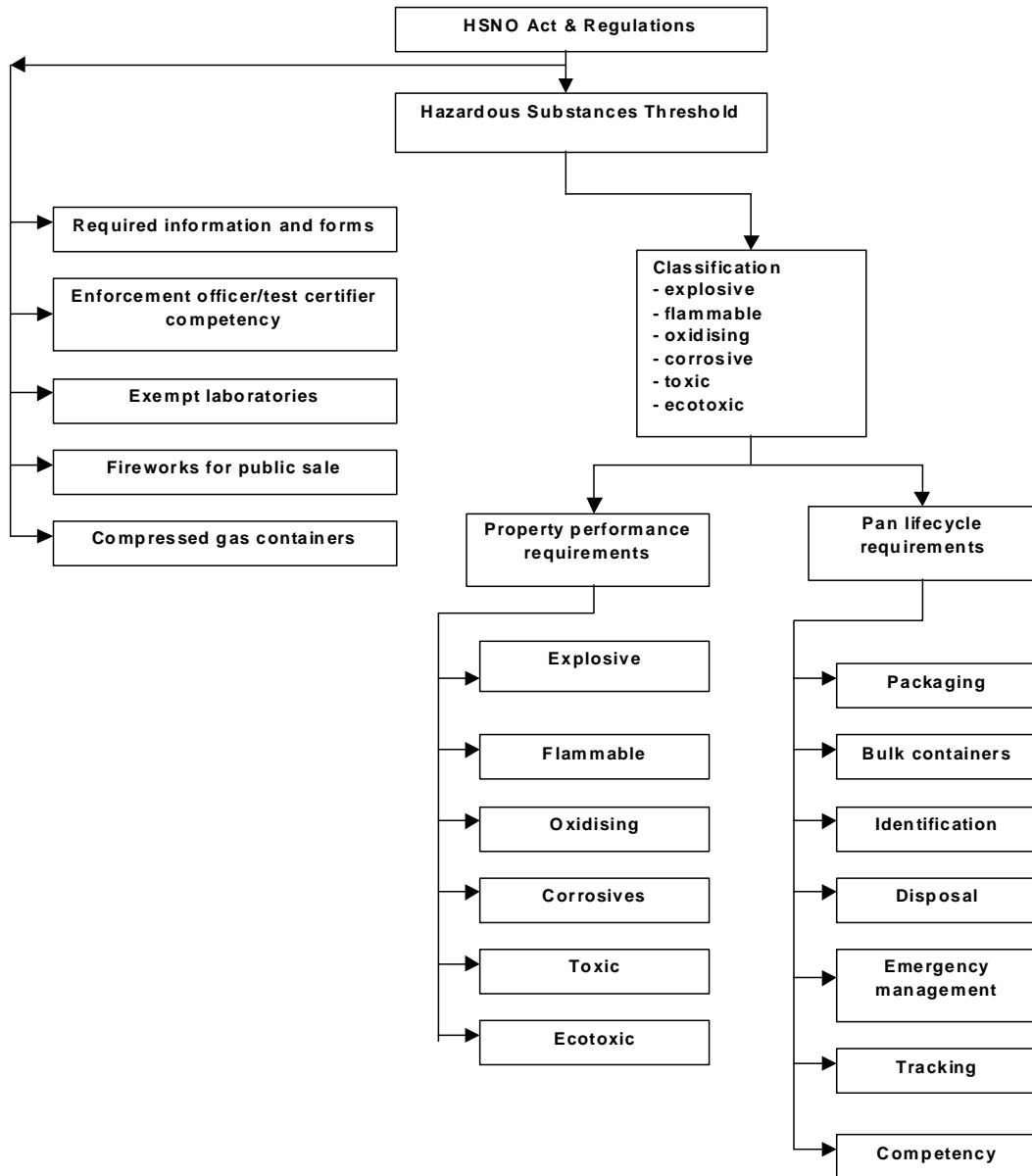
As a general rule of thumb, the higher the degree of hazard of a substance, the stricter the controls that will be placed on it. If a substance triggers more than one property threshold - for example, it is both toxic and flammable - controls will be based on both hazardous properties.

An overview of the HSNO regulatory framework is shown in Figure 3.1.



Notes

Figure 3.1 HSNO regulatory framework



Exclusions from the regulatory framework Act

HSNO controls generally do not apply to substances required for the motive power or control of a motor vehicle, aircraft or ship while it is contained in the fuel system, electrical system, or control system of the vehicle, aircraft or ship.

Similarly, they do not apply to any fuel gas supplied or used in a gas distribution system, gas installation or gas appliance when they are subject to the Gas Act 1992 and regulations made under that Act.

Exemptions from the regulatory framework of the HSNO Act

The HSNO Act provides for several exemptions from the regulatory control framework of the Act. These include:

- small-scale laboratories
- food
- medicines.

Small-scale laboratories

Under section 33 of the HSNO Act, hazardous substances intended solely for small-scale use in research and development or teaching are exempt from the Act if **all** of the following apply:

- the substance is used in a laboratory that meets the prescribed requirements
- the use does not create or involve a hazardous substance for which any application has been declined under the Act
- the importation, storage, and transportation of the hazardous substances each meet the prescribed requirements
- no such hazardous substance, nor any substance created from its use, is sold as a substance or in a product containing or derived from that substance.

The prescribed laboratory requirements are set out in the Hazardous Substances (Exempt Laboratories) Regulations 2001.

Food

Food in ready-to-eat form (including food additives) that has properties that trigger a HSNO threshold is exempt from the requirements of the Act (unless it is a substance previously covered under the old legislation e.g. flammable alcoholic spirits in bulk).

However, food additives that have not been mixed with, or added to, any other food or drink are **not** exempt from the Act. 'Food' and 'food additive' have the same meaning as in the Food Act 1981.

This food exemption is provided for in the *Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001* and is made under section 75 (1)(g) of the HSNO Act.

Controls are performance-based

HSNO controls are, for the most part, designed to be performance-based. This means regulations prescribe the requirements that must be met, not how they must be met.

It is then up to users of hazardous substances to decide which is the best and most cost-effective technology to meet the objective. The performance-based approach is designed to provide certainty about what is required while allowing people the flexibility to adopt new technologies.

The performance-based approach of the HSNO Act differs from that of the repealed legislation, which was largely based on prescriptive requirements. Prescriptive requirements tend to be very specific and inflexible.

An example of a performance-based requirement is:

“The substance must be packed in a package which is capable of withstanding the impact equivalent to a drop from 1.8 metres onto a rigid, flat surface at any orientation, without losing its ability to retain its entire content”.

This requirement defines the objective (ability to withstand being dropped) and provides a means of measuring, ahead of an incident, the performance standard of that objective. However, it does not limit the type of technology (design materials etc) used to construct the package. Specification in this form is designed to both provide *certainty* about what is required and to provide *freedom* to adopt new, different, and potentially improved and lower cost technologies.

Variation of default controls

The HSNO Act enables the Authority to modify default controls set on hazardous substances specified in regulations, where this is indicated as necessary. The Authority is required to ensure that in varying any controls on hazardous substances, they are consistent with the hazards and risks the substance presents across its life cycle.

New controls largely mirror historical controls

Existing hazardous facilities or users of hazardous substances are expected to largely meet HSNO performance standards given that the new controls have been largely engineered on historical prescriptive requirements. However, it is likely that other hazardous properties of a substance that were previously not considered (for example, ecotoxicity) will result in the setting of additional controls.

3.2.3 HSNO regulations on hazardous substances

Types of regulations

A range of regulations has been promulgated under the HSNO Act. These are listed in Table 3.4, and are discussed in greater detail below.

Minimum Degree of Hazard Regulations

A “minimum degree of hazard” or property threshold is the amount or concentration of a hazardous substance that is likely to cause an adverse environmental effect on people or the environment. It is the trigger level for any hazardous property that may, after consideration by the Authority, require appropriate controls to be placed on a hazardous substance.

The Minimum Degree of Hazard Regulations specify critical thresholds for a range of hazardous properties, which determine whether a substance is deemed to be hazardous or not. Many substances can trigger the thresholds for more than one hazardous property. For example, petrol will trigger thresholds for flammable, toxic and ecotoxic properties.

The threshold for a flammable liquid (Class 3.1) is as follows:

“A liquid is a flammable liquid if it gives off a flammable vapour which ignites in a closed flashpoint test at a temperature of $\leq 93^{\circ}\text{C}$ ”.

Therefore, any liquid that meets this threshold is deemed to be hazardous in terms of the flammable liquid threshold.

Classification Regulations

The Classification Regulations provide a **classification scheme and matrix** that specify for each hazardous property class outlined below a number of types and degrees of hazard.

Hazardous property areas

The HSNO Act sets out six hazardous property areas in its hazard classification scheme. It closely follows the globally harmonised system (GHS) for hazard classification. This work was initiated by the agreements made at the United Nations Conference on Environment and Development 1992.

The six broad hazardous property areas are:

- explosiveness
- flammability
- oxidising ability
- corrosiveness
- toxicity
- ecotoxicity.

*Hazardous substance
classes*

By following international guidance for classifying hazardous substances (including dangerous goods for transportation purposes), the HSNO Act groups the above hazardous property areas into the following classes:

1. Explosiveness
2. Flammability – gases
3. Flammability – liquids
4. Flammability – solids
5. Oxidising
6. Toxic
8. Corrosiveness
9. Ecotoxicity

Again, it is noted that classes 6.2 (infectiousness) and 7 (radioactive materials) are not covered by the HSNO Act.

An overview of the hazard classification scheme is given in Tables 3.1 (Physical hazard classification) and 3.2 (Biological hazard classification).

The classification scheme is a matrix. It contains columns that set out the types of hazard and rows that set out the degree of hazard. In general, the higher rows in the table indicate a higher degree of a particular type of hazard.

The classification scheme uses the following nomenclature:

- Class for specific hazardous property, for example, explosive substances are classified in Class 1, while toxic substances are classified in Class 6 (and an explosive which was toxic would be in both classes)
- Subclass for the types of hazards within a class, for example, acute toxicity is classified as 6.1 while skin irritant is classified as 6.3 within Class 6 toxicity
- Category for the degree of hazard, such as Category D in subclass 6.1: acute toxicity. Substances in this category are less hazardous than a substance classified in 6.1 A: acute toxicity.

Table 3.1 Physical Hazard Classification

| Category | Explosive Class 1 | | | | | | Flammable Classes 2, 3 and 4 | | | | | | | | | Oxidising & Organic Peroxide Class 5 | | |
|----------|--------------------|----------------|------------------------------------|------------------------------|-------------------------------------|---------------------------|------------------------------|----------------|-------------|-------------------------------|--------------|---------------------|-------------------------------------|---|------------------------|--------------------------------------|-----------------------|----------------------|
| | Mass Explosion 1.1 | Projection 1.2 | Fire & Minor Blast/ Projection 1.3 | Minor fire or projection 1.4 | Very insensitive mass explosion 1.5 | Extremely insensitive 1.6 | Gases 2.1.1 | Aerosols 2.1.2 | Liquids 3.1 | Liquid Desens. Explosives 3.2 | Solids 4.1.1 | Self reactive 4.1.2 | Solid Desensitised explosives 4.1.3 | Spontaneously combustible, self heating etc 4.2 | Dangerous when wet 4.3 | Oxidising solids/ liquids 5.1.1 | Oxidising gases 5.1.2 | Organic Peroxide 5.2 |
| A | 1.1A | | | | | | 2.1.1 A | 2.1.2 A | 3.1 A | 3.2 A | 4.1.1 A | 4.1.2 A | 4.1.3 A | 4.2A | 4.3 A | 5.1.1 A | 5.1.2 A | 5.2 A |
| B | 1.1B | 1.2B | | 1.4B | | | 2.1.1 B | | 3.1 B | 3.2 B | 4.1.1 B | 4.1.2 B | 4.1.3 B | 4.2B | 4.3 B | 5.1.1 B | | 5.2 B |
| C | 1.1C | 1.2C | 1.3C | 1.4C | | | | | 3.1 C | 3.2 C | | 4.1.2 C | 4.1.3 C | 4.2C | 4.3 C | 5.1.1 C | | 5.2 C |
| D | 1.1D | 1.2D | | 1.4D | 1.5D | | | | 3.1 D | | | 4.1.2 D | | | | | | 5.2 D |
| E | 1.1E | 1.2E | | 1.4E | | | | | | | | 4.1.2 E | | | | | | 5.2 E |
| F | 1.1F | 1.2F | 1.3F | 1.4F | | | | | | | | 4.1.2 F | | | | | | 5.2 F |
| G | 1.1G | 1.2G | 1.3G | 1.4G | | | | | | | | 4.1.2 G | | | | | | 5.2 G |
| H | | 1.2H | 1.3H | | | | | | | | | | | | | | | |
| J | 1.1J | 1.2J | 1.3J | | | | | | | | | | | | | | | |
| K | | 1.2K | 1.3K | | | | | | | | | | | | | | | |
| L | 1.1L | 1.2L | 1.3L | | | | | | | | | | | | | | | |
| N | | | | | | 1.6N | | | | | | | | | | | | |
| S | | | | 1.4S | | | | | | | | | | | | | | |

Table 3.2 Biological Hazard Classification

| Category | Toxicity Class 6 | | | | | | | | Corrosiveness Class 8 | | | Ecotoxicity Class 9 | | | |
|----------|------------------|-------------------|------------------|-------------------|-------------|----------------|----------------------------------|---------------------------|-----------------------|--------------------|-------------------|---------------------|----------|----------------|------------------|
| | Acute toxic 6.1 | Skin irritant 6.3 | Eye irritant 6.4 | Sensitisation 6.5 | Mutagen 6.6 | Carcinogen 6.7 | Reproductive / developmental 6.8 | Target organ systemic 6.9 | Metallic Corrosive 8 | Skin Corrosive 8.2 | Eye Corrosive 8.3 | Aquatic 9.1 | Soil 9.2 | Vertebrate 9.3 | Invertebrate 9.4 |
| A | 6.1 A | 6.3 A | 6.4 A | 6.5 A | 6.6 A | 6.7 A | 6.8 A | 6.9 A | 8 A | 8.2 A | 8.3A | 9.1 A | 9.2 A | 9.3 A | 9.4 A |
| B | 6.1 B | 6.3 B | | 6.5 B | 6.6 B | 6.7 B | 6.8 B | 6.9 B | | 8.2 B | | 9.1 B | 9.2 B | 9.3 B | 9.4 B |
| C | 6.1 C | | | | | | 6.8 C | | | 8.2 C | | 9.1 C | 9.2 C | 9.3 C | 9.4 C |
| D | 6.1 D | | | | | | | | | | | 9.1 D | 9.2 D | | |
| E | 6.1 E | | | | | | | | | | | | | | |

Pan-life cycle controls

Pan-life cycle controls cover the following aspects:

- packaging and containment - that is, strength, durability and resistance to contents for packages and bulk containers (both fixed and moveable)
- identification - information on labels, signs, documentation, advertising and safety information for workers
- emergency preparedness - ensuring information or equipment is on hand to deal with emergencies (different requirements for three levels of emergencies are identified)
- disposal - requiring disposal in a way which does not create damage or harm to the environment, or the health and safety of people at the end of a substance's life cycle (disposal includes treatment, discharge to the environment and export)
- tracking – systems and processes to locate highly hazardous substances, to keep records and to provide documentation
- competency of persons handling highly hazardous substances (approved handlers).

Other controls

The HSNO Act also has other controls that are not directly related to a substance's hazard classification. These apply in special circumstances, including:

- small-scale laboratories coming under the exemption for the small-scale use of hazardous substances in research and development or training (s 33 of the HSNO Act)
- competency requirements for test certifiers and enforcement officers
- restrictions on the sale of fireworks to the public
- compressed gas cylinders and control of compressed gases.



Notes

Alternative means of control

In special cases, the Authority can recommend alternative, economic or market-based control mechanisms for hazardous substances. These could include, for example, an environmental user charge on a specific hazardous substance to minimise its use, or transferable permits.

This will happen on a case by case basis and will require other Government approvals before they take effect – e.g. the making of a new regulation.

Example of hazardous substance approval

Appendix A to this workshop manual contains a decision report by the Authority referring to the approval of an agricultural insecticide called “Clobber* 25 WP” on 23 July 2002.

This report outlines the approach to assigning controls to a hazardous substance under the HSNO Act.

Quick Guide to HSNO life cycle controls

Table 3.3 summarises the key lifecycle controls on hazardous substances that everybody has to be aware of and to comply with. Table 3.4 provides a summary of existing regulations that have been developed under the HSNO Act.



Notes

Table 3.3 Quick guide to key controls on hazardous substances

The key controls on hazardous substances that affect people every day in New Zealand are shown below. This list is not comprehensive, but aims to give a broad understanding of how the likely applicable controls might apply.

There are some controls that everyone has to comply with if they are involved in any aspect of using, storing, transporting or disposing of a hazardous substance.

General requirements to keep people and the environment safe

Everyone must comply with the controls on the specific hazard properties of each substance. This is achieved by limiting the exposure of people or the environment to the substance by complying with exposure limits set by the Authority for both toxic and ecotoxic substances, or by keeping ignition sources and oxidisers (substances that accelerate burning) away from flammable or explosive substances (and keeping flammable substances away from oxidisers).

Certification and documentation

Everyone must make sure that they have the right documentation and certification for the substances they deal with, ensuring that, if required:

- only certified approved handlers deal with certain substances
- certification has been obtained e.g. for specialised equipment for handling the substances
- records and tracking information are available for highly hazardous substances.

Identification

Information will be supplied with each hazardous substance that helps people to safely manage it. This information must remain with the substance and continue to be readable.

Packaging

Each hazardous substance must be supplied in packages that comply with the packaging controls. Everyone should make sure that this packaging is not damaged or that the substance is not transferred to other packages that do not meet these controls.

Emergency preparedness

Everyone needs to be prepared in case there is an emergency:

- in some cases an emergency plan is needed
- in most cases, enough information needs to be available (usually on a label) for people to be able to identify and deal with an emergency. On-site signage may also be needed
- in other cases, particular equipment (like fire extinguishers) needs to be available where the substance is located
- for larger quantities, the site where the substance is kept needs to be designed so that if there is a spill, the substance is contained
- if a substance is being held temporarily, the person holding the substance must make sure that certain conditions are being met to prevent an accident.

Disposal

Disposal controls are designed so that substances are disposed of in the right way. Everyone must make sure they follow the instructions for disposal supplied with the substance. There are specific disposal requirements for different types of substances, and users of hazardous substances must be aware of what these are.

Table 3.4 Overview of regulations developed under the HSNO Act 1996

- Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001
- Hazardous Substances (Classification) Regulations 2001
- Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001
- Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001
- Hazardous Substances (Exempt Laboratories) Regulations 2001
- Hazardous Substances (Packaging) Regulations 2001
- Hazardous Substances (Identification) Regulations 2001
- Hazardous Substances (Disposal) Regulations 2001
- Hazardous Substances (Emergency Management) Regulations 2001
- Hazardous Substances (Tracking) Regulations 2001
- Hazardous Substances (Personnel Qualifications) Regulations 2001
- Hazardous Substances (Fireworks) Regulations 2001
- Hazardous Substances (Forms and Information) Regulations 2001

It is noted that regulations for road and rail tank-wagons for liquid and gaseous hazardous substances, for compressed gases and for stationary bulk containers are still in development.



Notes

Transfer process

The transfer process for hazardous substances includes three major steps:

1. Preparation of a list of substances to be transferred
2. Classification and assignment of controls to hazardous substances identified in 1.
3. Preparation of policy for regulatory drafting.

Preparation of a list of substances to be transferred

At the outset of the transfer process, a list of substances with hazardous properties to be considered for transfer is compiled. The numbers of hazardous substances listed for transfer may be reduced further by grouping them based on similarity in composition and the hazard profile.

This list is circulated to key stakeholders and interested parties for comment, and then reviewed taking into account the submissions received.

Classification and assignment of controls to hazardous substances

The next step is the classification and assignment of default controls to hazardous substances on the list according to the HSNO classification, hazardous property and life cycle control regulations. Controls are varied where deemed appropriate, and the list is again circulated for review by key stakeholders.

Preparation of policy for regulatory drafting

The last step is the preparation of policy for regulatory drafting. The transfer of substances is then achieved by creating regulations, which confirm assessment and approval, by ERMA New Zealand. Once this process is completed, the substances and their controls will be transferred to the HSNO register.

What happens upon transfer

It is important to understand that as soon as the transfer of a substance or groups of substances happens, the controls specified by the HSNO Act start to apply.

Once substances have been transferred to the HSNO Act, the licenses, permits and so on required under the old legislation will no longer be needed. Instead, users may need to obtain test certificates to show that they comply with some of the new controls.

Process and timing of hazardous substance transfers

The process ERMA New Zealand adopts for transferring hazardous substances from repealed legislation to the HSNO regime covers two broad substance groups:

- substances that were assessed and listed, licensed, permitted or otherwise specifically regulated under repealed legislation, including registered pesticides, scheduled toxic substances, lawfully used dangerous goods, authorised explosives and licensed animal remedies (approximately 6000 substances)
- notified toxic substances (NOTs) – substances that have been notified but not assessed under section 32 of the repealed Toxic Substances Act (215,000 substances).

The timing for transferring legally existing hazardous substances to the HSNO regime has been extended several times due to the complexity of the process and the substances involved. The revised timeframe, broken down into specific groups to facilitate the transfer process, is as follows:

- authorised explosives (retail fireworks, safety (small arms) ammunition and remainder of explosives) – August 2003
- dangerous goods (Class 2 gases, Classes 3, 4, and 5, petrol and petroleum products, and other dangerous goods including non-flammable compressed gases and substances with a flash point between 60 °C and 93 °C) - April 2004
- all pesticides, including controlled vertebrate poisons (containing 1080, sodium cyanide, potassium cyanide, phosphorus and DRC 1339), non-controlled vertebrate poisons and fumigants and timber treatment chemicals (antispstains and timber preservatives) - July 2004
- background work will be carried over the next few years to address licensed animal remedies and sort through notified toxic substances (NOTs). But the bulk of the transfer of NOTS will not take place until after July 2003.

How to check progress on the transfer of hazardous substances

The first place to check whether a substance has been approved is the ERMA New Zealand public register (available on the ERMA New Zealand website).

In addition, there are a number of lists that can be checked to find out if a substance is covered by an existing approval. The Ministry of Agriculture and Forestry website (www.maf.govt.nz) covers registered pesticides and licensed animal remedies.

ERMA New Zealand has also compiled a list of the single component substances identified for transfer to date. It contains identified dangerous goods covered in Part C of the seventh schedule to the HSNO Act, scheduled toxic substances specifically listed in the schedules to the Toxic Substances regulations, and common (notified more than five times) notified toxic substances (NOTS).

Along with these lists, ERMA New Zealand also maintains a database of toxic substances notified under s32 of the Toxic Substances Act (NOTS). This database is not publicly searchable, and users, manufacturers or importers of hazardous substances need to check with ERMA New Zealand on the status of these substances.



How to find out more

- Getting started: A guide to HSNO commencement for hazardous substances. ERMA New Zealand, 2001. (ER-UG-00-1 5/01)
- Your Guide to the Hazardous Substances and New Organisms Act 1996. Ministry for the Environment, 2001. Prepared by Environment and Business Group Ltd and Tonkin and Taylor Ltd.
- User guide to HSNO Thresholds and Classifications. ERMA New Zealand, 2001. (ER-UG-03-1)
- Summary user guide to HSNO Thresholds and Classifications. ERMA New Zealand, 2001. (ER-UG-04-1)
- User guide to the HSNO control regulations. ERMA New Zealand, 2001. (ER-UG-05-1 11/01)
- HSNO Act and regulations
- Quick Guides (refer ERMA New Zealand website).

3.3 KEY PROVISIONS AND CONTROLS FOR HAZARDOUS SUBSTANCES UNDER THE RMA

Overview

The Resource Management Act 1991 (the RMA) is based around the principle of sustainable management of natural and physical resources. The emphasis is on the management of the actual and potential effects of activities on the environment.

Under the RMA, local authorities are delegated specific functions, powers and duties in order to achieve the integrated management of natural and physical resources in their district or region.

Territorial authorities have functions, powers and duties to manage the effects of activities on land (including the surface of water) through district plans.

Regional councils have functions, powers and duties to manage the effects of activities in respect of the coastal marine area, controlling use of land for the purposes of soil conservation, maintaining the quality of water in water bodies, avoiding natural hazards, taking, damming or diverting water and controlling discharges into air, water or on to land.

Requirements for the control of hazardous substances under the RMA

The focus of RMA is on managing the actual or potential adverse effects on the environment that might occur when hazardous substances are stored, used, disposed of, transported or discharged *at a particular site*. The RMA, through district and regional plans, provides the means for developing methods and rules to manage hazardous substances on a *site and environment-specific basis*.

This means that controls on hazardous substances under the RMA can be designed on a site-specific basis, depending on the aspirations of local communities and site-specific environmental circumstances.



Notes

**Definition of
“hazardous
substance” under the
RMA**

As outlined in Module 2 of this manual, the HSNO Act amends the RMA, by including a definition for “hazardous substance”, as follows:

“Hazardous substance” includes, but is not limited to, any substance defined in section 2 of the Hazardous Substances and New Organisms Act 1996 as a hazardous substance.”

The HSNO Act’s definition of hazardous substances is presented in Module 2.

**Definition of
contaminant**

It is important to distinguish between the definitions of “hazardous substance” and “contaminant” when used in the context of the RMA.

While the term “hazardous substance” is used to describe the intrinsic properties of a hazardous substance (as prescribed by the HSNO Act), a contaminant is used to describe the effects of a range of causative factors on the environment (including, but not limited to, hazardous substances).

A contaminant includes any substances (including gases, odorous compounds, liquids, solids and microorganisms) or energy (excluding noise) or heat that either by itself or in combination with the same, similar, or other substances, energy or heat:

- when discharged into water changes or is likely to change the physical, chemical or biological condition of water
- when discharged onto or into land or into air, is likely to change the physical, chemical or biological condition of the land or air.



Notes

**Functions of local
authorities for the
control of hazardous
substances under the
RMA**

There are two main areas where local authorities hold functions for controlling hazardous substances under the RMA:

- the use, storage, disposal and transportation of hazardous substances (regional councils and territorial authorities)
- the discharge of contaminants (including hazardous substances) into the environment (regional councils).

These functions are briefly explained below, and will be discussed further in Module 5 of this training manual.

*Functions of regional
councils for hazardous
substances and
contaminants*

Under Section 30 of the RMA, regional councils have the following functions with respect to hazardous substances and contaminants:

The control of the use of land for the purpose of “ *The prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances*” (30)(1)(c)(v).

In respect of the coastal marine area, the control of :

30(1)(d)(iv) “*Discharges of contaminants into or onto land, air, or water:*”

30(1)(d)(iva) “*The dumping and incineration of waste or other matter and the dumping of ships, aircraft and offshore installations*”;

30(1)(d)(v) “*Any actual or potential effects of the use, development or protection of land including including the avoidance or mitigation of haztural hazards and the the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances*”

And “*The control of discharges of contaminants into or onto land, air or water...*” (30)(1)(f).

*Functions of territorial
authorities for hazardous
substances*

Under Section 31 (b) of the RMA, territorial authorities have the following functions with respect to hazardous substances:

“*The control of any actual or potential effects of the use, development or protection of land including for the purpose of-*

(ii) the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances” .

*Overlap of functions for
hazardous substances*

The functions of local authorities overlap in the area of land use control of hazardous substances. Section 62 of the RMA (as amended by the Resource Management Amendment Act 2003, refer Module 2) describes what must be covered in regional policy statements in terms responsibilities of local authorities hazardous substances. Section 62 also determines that where such responsibilities are not specified, territorial authorities retain the primary responsibility for the control of the use of land to prevent or mitigate the adverse effects of the storage, use, disposal and transportation of hazardous substances.

3.4 OTHER KEY PIECES OF RELEVANT LEGISLATION DEALING WITH ASPECTS OF HAZARDOUS SUBSTANCE MANAGEMENT

Overview

Although the HSNO Act is the main law for managing hazardous substances in New Zealand, it interfaces with a wide a number of other laws relating to transport, food, workplaces, buildings and the environment. However, not all of these interfaces are relevant to the roles and responsibilities of local authorities under the HSNO Act and RMA in relation to managing hazardous substances.

Legislation that is relevant in the above context and that is discussed in greater detail below include:

- Health Act 1956
- Building Act 1991
- Local Government Act 1974
- New Zealand transport legislation
- Maritime Transport Act 1994
- Fire Service Act 1975
- Civil Defence and Emergency Management Act 2002

Health Act 1956

The Health Act, and associated regulations and bylaws provide controls for any nuisances or conditions, which are likely to be offensive or injurious to public health. The Act requires CEOs of territorial authorities to control nuisances, offensive trades and the handling and storage of hazardous substances, by employing Environmental Health Officers (EHOs).

Because of their technical and scientific knowledge, EHOs in territorial authorities often fulfil a multitude of functions under the Health Act and the RMA, and may also act as Dangerous Goods Inspectors under the transitional provisions of the HSNO Act, and as Building Inspectors. They may also have a compliance and enforcement role under the HSNO Act if they are warranted as an enforcement officer by the territorial authority that employs them.



Notes

Building Act 1991

The Building Act provides for:

- necessary controls relating to building work and the use of buildings, and for ensuring that buildings are safe and sanitary...
- the co-ordination of those controls with other controls relating to building use and the management of natural and physical resources.

The Act particular requires, among other matters, to:

- safeguard people from possible injury, illness, or loss of amenity in the course of the use of any building ...
- make provision in a building used for the storage or processing of significant quantities of hazardous substances to prevent significant adverse effects on the environment (whether within the immediate locality or otherwise) arising from an emergency involving fire within that building.

Territorial authorities' functions include the administration of the Building Act and the regulations, associated enforcement activities and issuing project information memoranda (PIM).

With the advent of the HSNO Act, any structures or buildings specifically designed for containing hazardous substances (for example, a bulk storage tank for fuel) do not fall anymore within the scope of the Building Act. This responsibility is now covered by regulations made under the HSNO Act (HSNO Amendment Act 2000).

However, many hazardous facilities (other than bulk storage facilities) are housed in buildings that require building consents. Under the Building Act, these structures will also need to comply with requirements for fire safety and be subject to building consent approval and inspections by territorial authorities or building certifiers.



Notes

*Local Government Act
2002*

The Local Government Act (LGA) has recently been completely revised from the original 1974 version. It was enacted in 2002, with many of the provisions not coming into force until July 2003. Among the significant changes to the LGA are a revised purpose, and also consideration of the Treaty of Waitangi.

The LGA now:

- (a) states the purpose of local government; and
- (b) provides a framework and powers for local authorities to decide which activities they undertake and the manner in which they will undertake them; and
- (c) promotes the accountability of local authorities to their communities; and
- (d) provides for local authorities to play a broad role in promoting the social, economic, environmental, and cultural well-being of their communities, taking a sustainable development approach

The LGA 2002, among other matters, also addresses trade wastes and waste management. Some of these wastes comprise hazardous substances.

Section 146 of the new Act enables territorial authorities to make bylaws for the purpose of controlling trade waste. Sections 195 and 196 of the LGA allow the discharge of trade wastes into sewerage drains according to bylaws made under the LGA, provided that there is no breach of the RMA or the Health Act.

Part XXXI of the old LGA 1974 (amended through the Local Government Amendment Act 1996) continues to be retained under the new Act, with a review planned for the future. This part requires every territorial authority to promote effective and efficient waste management within its district, while having regard to environmental and economic costs and benefits for the district, and ensuring that the management of waste does not cause a nuisance or be injurious to health.

Under Part XXXI LGA 1974, every territorial authority is also required to adopt a waste management plan that makes provision for the collection and reduction, reuse, recycling, recovery, treatment, or disposal of waste in the district. Further, regional councils are authorised to fund, establish, and manage sites for the regional disposal of hazardous wastes.

*New Zealand Transport
legislation*

The new LGA 2002, through section 286, requires all territorial authorities to have waste management plan specified in Part XXXI of the LGA 1974 in place by 30 June 2005.

Any controls on hazardous substances set under the LGA are required to meet the minimum performance standards of the HSNO Act.

The Land Transport Act 1998 regulates the transport of hazardous substances on land. The Act provides for the promulgation of Land Transport Rules, of which the Land Transport Rule: Dangerous Goods 1999 Rule (45001) and associated New Zealand Standard 5433:1999 deal with the land transport of dangerous goods.

The Act establishes classes of hazardous substances and places a duty on consignors and transporters of goods to package, label, segregate and provide documentation for hazardous substances, as well as the training of drivers who transport hazardous substances.

Generally, New Zealand transport legislation follows international transport agreements in terms of managing the safety of transporting hazardous substances. Overall, the minimum requirements under the HSNO Act are consistent with the requirements for land transport of hazardous substances.

Local authorities have a role under the Land Transport Act, including a role to eliminate or reduce road hazards, including spilt hazardous substances.

*Maritime Transport Act
1974*

The purpose of the Maritime Transport Act includes:

- to protect the marine environment
- to continue, or enable, the implementation of obligations on New Zealand under various international conventions relating to pollution of the marine environment.

Section 36 of the Act authorises the Minister of Transport to make maritime rules for specified purposes, including responsibilities for the transport of dangerous goods to be carried by sea.

Part XXVII of the Act authorises the Minister of Transport to make marine protection rules for specified purposes.

Part XIX of the Act (Protection of Marine Environment from Harmful Substances) gives effect to the International Convention for the Prevention of Pollution from Ships (commonly referred to as MARPOL). In the Coastal Marine Area, these provisions are replicated by Section 15 B of the RMA and associated Resource Management (Marine Pollution) Regulations 1998, which refer to the discharge of harmful substances or contaminants from a ship or off-shore installation. Contaminants, by definition, include the definition of hazardous substances under the HSNO Act. The regulations define “harmful” in the context of MARPOL.

Section 15B of the RMA requires that no person may discharge a harmful substance or contaminant from a ship or off-shore installation unless it is permitted or controlled by regulations under the RMA, or a coastal or regional plan, or a resource consent.

Part XXI (Protection of Marine Environment from Dumping, Incineration, and Storing of Wastes) gives effects to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (commonly referred to as the London Convention). Section 15 A of the RMA gives effect to this convention in the Coastal Marine Area.

Part XXIII (Plans and Responses to Protect Marine Environment from Marine Oil Spills) requires every regional council whose region includes any coastline to prepare regional marine oil spill contingency plan for its region. Regional councils must appoint a regional coordinator and direct the use of the resources available to that regional council in the event of a marine oil spill.

Under the Act, the Director of Maritime Safety may take action where there are clear grounds that there is, or is likely to be, a discharge of a harmful substance or contaminant in breach of the Maritime Transport Act or the RMA.



Notes

The Maritime Safety Authority is also empowered to use funds from the New Zealand Oil Pollution Fund to meet certain costs incurred by regional councils in meeting their responsibilities under Part XXIII of the Act.

In the event of a discharge of harmful substances or the dumping of wastes that is in breach of the Act or the RMA, the owner of any ship or marine structure, or the person in charge of a marine operation, must pay the regional council for the reasonable costs that the council has incurred in dealing with the harmful substance or waste or other matter.

Fire Service Act 1975

Under the Fire Service Act, the Fire Service is responsible, in conjunction with other government departments and authorities, for managing hazardous substance emergencies, and the safety of persons and property endangered by hazardous substance emergencies. The Fire Service's equipment and trained personnel often makes the Fire Service the most appropriate agency to contain hazardous substances and make the site safe.

The Fire Service has accepted the responsibility for co-ordinating responses to hazardous substance emergencies in different regions, by convening Hazardous Substances Technical Liaison Committees. These committees often comprise Fire Service, OSH, Police, Public Health, as well as territorial authorities and regional councils.

A hazardous substance emergency for the purpose of the fire Service constitutes the release or potential accidental release of any hazardous substance from any building or other premises, or from any receptacle, container, vessel or pipe, or from any other conveyance (whether motorised or not), where that release of that hazardous substance constitutes a contaminant.

The Fire Service Commission, at its discretion, may charge for attendance at a hazardous substance emergency. More discussion on hazardous substance related emergencies is provided in Module 7.



Notes

*The Civil Defence
Emergency Management
Act (CDEM Act) 2002*

The Civil Defence Emergency Management Act (CDEM Act) 2002 came into effect on 1 December 2002. It replaced the Civil Defence Act 1983. Among other matters, the Act provides for more effective and efficient emergency readiness, response and recovery through the integrated activities of responsible agencies and relevant disciplines

The CDEM Framework involves several instruments of which the CDEM Act 2002 is but one. The instruments of the CDEM Framework include:

- CDEM Regulations
- National CDEM Strategy
- National CDEM Plan
- CDEM Group Plans
- Director's Guidelines
- other statutes (e.g. Biosecurity Act 1993, Building Act 1991, Fire Service Act 1975, Forest and Rural Fires Act 1977, Hazardous Substances and New Organisms Act 1996, Health Act 1956, Health and Safety in Employment Act 1992, Local Government Act 1974, Maritime Transport Act 1994, Resource Management Act 1991).

Civil Defence Emergency Management Groups (CDEM Groups) are a core component of the CDEM Act 2002. A CDEM Group is a consortium of the local authorities in a region working in partnership with emergency services, amongst other things, to:

- identify and understand hazards and risks
- prepare CDEM Group plans and manage hazards and risks in accordance with the 4R's (reduction, readiness, response and recovery).

Every CDEM Group must prepare and approve a Civil Defence Emergency Management Plan (CDEM Plan). These plans must state and provide for, among other matters:

- the hazards and risks to be managed by the Group
- the civil defence emergency management necessary to manage to hazards and risks
- the arrangements for declaring a state of emergency in the area of the Group.

3.5 OVERVIEW OF RELEVANT INTERNATIONAL AGREEMENTS

Overview

The main methods available under international law for countries to work together on global environmental issues are multilateral environmental agreements, or MEAs. MEAs are agreements between states which may take the form of “soft-law”, setting out non-legally binding principles which parties will respect when considering actions which affect a particular environmental issue, or “hard-law” which specify legally-binding actions to be taken to work towards an environmental objective. The RMA and the HSNO Act, and a range of other legislation, are key legal instruments in this context.

In exercising its functions, powers and duties under the HSNO Act, the Authority is required to take into account New Zealand’s international obligations. The Authority also needs to take into account these obligations when making decisions on approvals under the HSNO Act.

Some of the more relevant international agreements that relate to hazardous substances are outlined below.

*1992 Earth Summit and
Agenda 21*

Agenda 21 is used by governments, local authorities and individuals to implement the principle of sustainable development contained in the Rio Declaration promulgated by the 1992 Earth Summit. Both the RMA and the HSNO Act legislation give effect to this.

*The Framework
Convention on Climate
Change 1992*

One of the conventions agreed at the Earth Summit aimed at developing a global response to stabilising greenhouse gas concentrations in the atmosphere.

*The Montreal Protocol
on Substances that
Deplete the Ozone Layer
1989*

The Montreal Protocol sets targets for reducing the production and consumption of ozone depleting substances, which are implemented through the Ozone Layer Protection Act 1996 and associated regulations.

