

Symposium on Priorities for Environmental Health

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MfE Initiatives in Environmental Health

- National Environmental Standards (Air Quality)
- National Environmental Standards (Water Quality)
- Contaminated land
- Stockholm Convention



National Environmental Standards Relating to Certain Air Pollutants, Dioxins and Other Toxics

RMA Regulations 2004 (incl amendments 2005)

14 standards :

- 7 standards ban activities that discharge significant quantities of dioxins and other toxics into the air
- 5 standards on ambient (outdoor) air quality
- a design standard for new wood burners in urban areas
- landfills over 1 million tonnes of refuse must collect greenhouse gas emissions.



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Protecting Environmental Health National Environmental Standards (Air Quality)

PM10 from fires and home heating,
vehicle emissions, industry

Breathing air-borne soot causes more
early deaths than road accidents

Ambient air quality NES limits set for

- PM10 particles: not to exceed 50 $\mu\text{g}/\text{m}^3$ average over 24 hrs, by 2013
- CO, SO₂, NO₂, ozone,



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School incinerators banned unless a resource consent obtained

Air pollution causes:

- respiratory diseases,
- asthma attacks,
- reduced immunity
- premature deaths.

Over the next 15 years better air quality will save 625 lives and prevent over 570 hospitalisations



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Protecting Environmental Health

National Environmental Standards (Air Quality)

a new standard for clean & efficient woodburners



Aus/NZ standards for

- Thermally efficiency design
- Low smoke emission limit
(max particle of 1.5 g/kg of wood burnt)



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Protecting Environmental Health National Environmental Standards (Air Quality)

Improving air quality means less ill-health

Reduce air pollutants: Dioxins, PAHs

Activities are banned:

- No burning of waste at landfills
- No burning of tyres
- No burning of coated wire
- No burning of bitumen for road maintenance
- No burning of oil
- No new high-temperature hazardous waste incinerators.



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Protecting Environmental Health

National Environmental Standards (Water Quality)



The NES ensures that activities in drinking water catchments do not pollute water, so water remains safe for people to drink after existing treatment

- NES applies to new consents;
- transition period for revising rules in plans;
- if accident occurs then water supplier must be notified



Protecting Environmental Health

Sustainable Water Programme of Action

Outcomes sought for freshwater:

- ✓ Improve quality and efficiency of use
- ✓ reduce impact of land-use on water quality
- NPS on water uses and values
- NES to set environmental flows
- NES on measuring water flows



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The Dairying and Clean Streams Accord

Poor water quality in NZ is mainly from fertiliser and dung/nutrient run-off



Fonterra, regional councils, MfE & MAF are working to achieve sustainable dairy farming and to reduce impacts on streams, rivers, lakes, ground water and wetlands.



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The Dairying and Clean Streams Accord

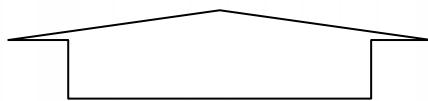


- Keep dairy cattle out of streams, rivers and lakes and their banks
 - use fences, bridges or culverts cross a watercourse.
 - treat dairy effluent before discharge
 - manage nutrients to minimise losses to ground and surface waters.

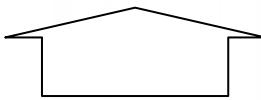


Protecting Environmental Health Issues in Contaminated Land

Environment protected (including human health)



Fit-for-purpose land (maximise human and natural values)



Good-quality land maintained

Contaminated land
managed/remediated to
greatest extent practicable



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Protecting Environmental Health Issues in Contaminated Land

Signs of progress:

- 10 contaminated land technical guidelines developed
- Contaminated Sites Remediation Fund now allocates \$2.5M/yr
- RMA amended:
 - contaminated land functions assigned to councils;
 - definition added of contaminated land

BUT 3 main problems nationally:

- contaminated land management practice is variable region to region
- different numerical soil values being used
- identifying & recording contaminated land information is variable



Protecting Environmental Health Issues in Contaminated Land

Towards a comprehensive framework for managing contaminated land in NZ:

- policy discussion paper out for consultation
- NES soil values to be looked at (land use clean-up criteria)

Guideline on classification and information management protocols:

- best practice for classifying contaminated land
- how to manage a register and data for recording, tracking and reporting on contaminated site management



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Protecting Environmental Health

Stockholm Convention on Persistent Organic Pollutants NZ's National Implementation Plan

POPs are:



- Toxic
- Disperse everywhere
- Bioaccumulate
- Excreted only slowly
- Pass from mother to infant in utero and via breast milk
- No medical treatment



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Stockholm Convention on Persistent Organic Pollutants

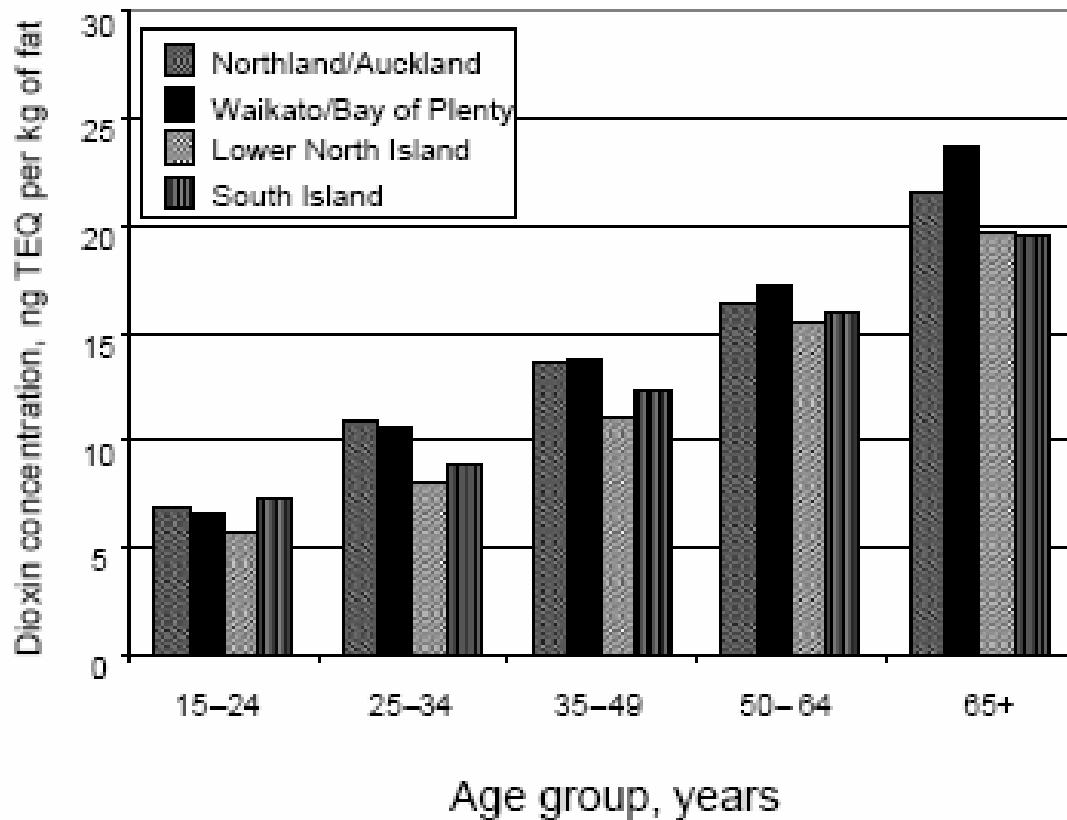


Chart 1. Average dioxin concentrations in serum fat for each region and age group

Small amounts of these toxic chemicals build up in our bodies over a lifetime



Protecting Environmental Health

Stockholm Convention on Persistent Organic Pollutants

Currently listed POPs: dubbed the “dirty dozen”

Aldrin	Chlordane	Dieldrin	DDT
Endrin	Heptachlor	Hexachlorobezene	Mirex
Toxaphene	PCBs	Dioxins	Furans

Being assessed - potentially “new POPs” (10)

Polybrominated diphenyl ethers	chlordecone
Lindane and isomers	short chained chlorinated paraffins
Perfluorooctane sulphate	pentachlorobenzene



Protecting Environmental Health

Stockholm Convention on Persistent Organic Pollutants

Obligation to protect human health and the environment by reducing, and, where feasible, eliminating the production and environmental releases

NZ's national implementation plan:

- Inventory of dioxin releases + Action Plan to reduce/eliminate
- Eliminate remaining use of PCBs by 2016
- 228 tonnes POP-pesticides collected > overseas disposal (175 tonnes to go)
- Management of POPs-contaminated land
- Bio-monitoring programme (breast milk, serum) to track the NZ population's declining exposure to POPs.



Protecting Environmental Health Issues in Contaminated Land

Guideline published recently:

Identifying, investigating and
managing risks associated
with former **sheep-dip sites**:
A guide for local authorities

Contamination due to
historical use of arsenic,
dieldrin, DDT, aldrin, lindane



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Issues in Contaminated Land

Cleaning-up NZ's most contaminated Site



- DDT, Dieldrin and Lindane among the 84 pesticide formulations produced on site from 1930's to 1988
- Highly contaminated land and marine sediments
- Mapua site approx 3.4 hectares - treating ~20,000m³ soil



Protecting Environmental Health Issues in Contaminated Land

POPs - contaminated soil is treated by a NZ-developed ball milling technology - a world first



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