



APRIL 2001

Review of the ambient air quality guidelines: Seeking comment from Maori

History

The Ministry for the Environment first established air quality guidelines in 1994. We recommend ways to deal with air pollution and specified guideline levels of air pollution that were considered not to be harmful in to human health. In addition, one pollutant, fluoride (which can damage plant life), was also set at a level that ensured the protection of natural vegetation. The guidelines only relate to outdoor conditions and are not applied to indoor or workplace conditions.

Since 1994, better research, more information and new pollutants have arisen. As a result, it is time to update the guidelines and improve the protection of our environment.

This update also provides an opportunity for the Ministry to talk to Maori about concerns they hold in respect to air quality.

Seeking Maori input

Air pollution is an undeniable product of life on Earth. Geysers and mudpools will continue to boil and volcanoes will continue to erupt. People will continue to drive cars, burn fossil fuels and manufacture goods. Many sources of air pollution are at worst unavoidable and at best manageable.

The Ministry for the Environment, in updating the Ambient Air Quality Guidelines, is setting levels of air pollution that will be safe, manageable and, in the long term, acceptable to our health and environment (in the table on the back page).

We recognise the importance of setting safe standards. We aim to take a careful approach to ensure that those most likely to be affected by poor air quality are not harmed. Given the types of health difficulties that are common amongst Maori, the Ministry will develop a precautionary approach that will account for these health conditions.

The Ministry needs to know what aspects of air quality are Maori concerned about and what we should do about those concerns.

This information sheet is written as the basis for discussion amongst Maori on the subject of air quality. It seeks to prompt responses from Maori on the following matters:

- What is the relationship between Maori and air/air quality?
- How can this relationship be provided for in the establishment of air quality guidelines?
- How can Maori rangatiratanga be recognised in the operation of the guidelines?

- What role should Maori have in the implementation air quality guidelines?

The Ministry is seeking input based around two key reference points.

The first is that the Treaty of Waitangi conveys responsibilities to the Crown to protect Maori possession over their taonga and to ensure Maori receive an equitable level of support and protection as the rest of society. (This is particularly relevant when considering the impacts of air quality on Maori health).

The second is the Resource Management Act which conveys responsibilities to the Ministry to act in manner consistent with sections 6(a), 7(e) & 8.

Air as a taonga

A recent Ministry for the Environment discussion document outlined a Maori perception of air quality.

The traditional Maori view of air is encapsulated by Ranginui (Sky Father) and Tawhirimatea (guardian of the wind). The expression Ko Ranginui e tu iho nei, Ko Papatuanuku [e takoto nei] is heard throughout the country on marae and at hui. This classical expression denotes the creation genealogy, and depicts how Maori see the world as being contained within Ranginui (the sky) and Papatuanuku (the land). Concepts such as tihei



mauriora (the breath of life), Nga hau e wha (the four winds) and te hau o Tawhirimatea (the wind of Tawhirimatea) are also tohu (indicators) within Maori society to signify the importance of air for Maori.

The protection of air resources is viewed by Maori in terms of the effects of activities on both inside and outside [sic] Maori tribal rohe (boundary). Activities which may impact on Maori boundaries may include airports, industry, buildings, rock concerts, telecommunications and global issues. Health concerns may also be included in the impacts of these activities on the domain of Ranginui, a protected taonga under the Treaty of Waitangi.¹

Recent evidence before the Waitangi Tribunal on the use and management of the radio spectrum (Wai 776) has suggested that air also an integral part of the Maori perception or definition of kainga.²

Put simply, kainga might best be described as including everything that lies between Sky and Earth.³ Clearly, this includes air and air quality.

Given that air and air quality can be described as both a taonga and a part of the traditional kainga, the Crown have a clear responsibility clear to actively protect Maori Treaty rights.

Maori health and air quality

In a publication entitled *Progress towards Closing Social and Economic Gaps between Maori and Non-Maori*, Te Puni Kokiri, the Ministry for Maori Development, made the following observations:

- Despite dramatic improvements in Maori infant mortality, Maori rates continue to be higher than those for non-Maori.⁴
- Historically, Maori have been more likely than non-Maori to be hospitalised for asthma. Although Maori asthma rates decreased in the early 1990s, recent increases have occurred. As a result the disparity widened considerably in 1997.⁵
- Cancer is one of the leading causes of death for both Maori and non-Maori. However, the incidence of cancer remains higher among Maori than non-Maori. Since 1988, the prevalence of cancer among Maori has increased while the prevalence amongst non-Maori has declined.⁶
- Between 1981 and 1997, Maori hospitalisation rates for pneumonia and influenza increased, particularly during the last five years of this period.⁷
- Since the early 1980s, non-Maori rates of hospitalisation from strokes have remained relatively stable, whilst rates for Maori have fluctuated in an upward direction.⁸

It is thought that many air-born pollutants have a greater affect on particularly vulnerable sectors within the New Zealand population. Maori who predominantly suffer from more severe cases of respiratory and cardiovascular disease and asthma may be particularly hard hit. The following health statistics are important to consider when reviewing the guidelines for air quality:

- Maori endure far more severe cases of respiratory illness (such as asthma and emphysema) than non-Maori.
- The rate of sudden infant death syndrome (SIDS) for Maori babies is three times greater than that of non-Maori.

- Cancer is the greatest cause of death amongst Maori (24% of all fatalities amongst Maori women and 22% of all fatalities amongst Maori men).
- Lung cancer is the greatest cause of cancer death amongst Maori men and women.
- Coronary heart disease accounts for 17% of all fatalities amongst Maori women and 21% of all fatalities amongst Maori men.
- Strokes, diabetes and chronic obstructive respiratory diseases (e.g. asthma and emphysema) are other common causes of death amongst Maori.

Given the differences between Maori and non-Maori health in New Zealand, the Crown has an on-going responsibility in raising Maori health statistics to a level at least compatible to that of the rest of the population.

Other issues of significant interest to Maori

Potential issues of significance associated with air pollution may also include:

- The deposition of air pollutants onto mahinga kai, waahi tapu, waterways and marae. For example, the deposition of corrosive particles onto marae buildings.
- The reduction of visibility. For example, in the Bay of Plenty, Putauaki maunga is sometimes shrouded in brownish clouds as a result of air discharges that reduce visibility.
- The increase in airborne smell. For example, some meat processing plants have a particular smell associated with their activities and discharges into air.
- The impact of contaminants on important or valued sites. For example, discharge material from the flue of a crematorium can be blown by predominant winds over puna waiora or mahinga kai.

In developing air quality guidelines, the Ministry will need to develop an approach that is consistent with sections 6(a), 7(e) and 8 of the Resource Management Act.

Maori culture and traditions with air

Maori have a long established relationship with the air. Present day relationships are likely to vary from iwi to iwi and hapu to hapu.

Given the range of diversity, experience and circumstance amongst Maori, it is difficult to adopt a 'one-size-fits-all' approach to air quality. Clearly the factors that influence air quality in Christchurch for Ngai Tahu are different from the factors that influence air quality in Kawerau for Tuwharetoa-ki-Kawerau. Furthermore, air quality concerns in the cities may be markedly different from those in rural areas.

In developing guidelines, we aim to provide enough flexibility for local regional criteria (standards, targets, objectives, etc.) to be developed for local circumstances. If guidelines are focused at a

regional level, Maori, too, might be better placed to establish regional criteria that are consistent with the tikanga, history and experiences of that region.

There is a strong reliance on meaningful relationships existing between regional councils and Maori, but this is not always the case. The guidelines may also discuss how the relationship between regional councils and Maori relation could be developed.

Clearly, the guidelines need to focus on what is relevant and appropriate for iwi and hapu at a local and regional level, while making efforts to focus on the base relationship between iwi and hapu and regional councils.

Particular regard to kaitiakitanga

Kaitiakitanga is a creation from the Maori world (te Ao Maori). As kaitiaki, Maori are expected to determine their activities according to the benefits and effects accrued to the wider whanau group (including whanau, hapu, iwi, plants, animals, stars, etc.).

The ties of whakapapa or genealogy, which identified individual within their kin group, also provided the rules by which they lived.⁹

Decisions based on kaitiakitanga attempt to recognise the widest range of possible factors that may affect or be affected by a particular activity. The right of Maori to determine effects on the environment brought with it obligations and responsibilities. Their responsibilities tied directly to the state of the earth's resources and their ability to maintain an existence in a particular area for any length of time.

The mana of the Te Roroa chiefs and people depended on their ability to control their main economic resource which was the land.¹⁰

In a more modern sense, kaitiakitanga equates to a right to control and regulate access to a resource according to tribal or hapu preferences and wider considerations.

In its [the Waitangi Tribunal's] view, rangatiratanga includes management of resources and other taonga (material and non-material treasures) according to cultural preferences."¹¹

In paying particular regard to

kaitiakitanga, the Ministry needs to consider how Maori cultural preferences and decision-making principles can be incorporated into the operation of the guidelines. The factors that are considered in setting guidelines need to include those matters of importance to Maori. The manner in which the quality of air is measured, assessed and regulated also needs to allow for Maori participation.

Summary

Air and air quality can be described as both a taonga and a part of the traditional kainga. The Crown therefore has a clear responsibility under article two of the Treaty to actively protect Maori Treaty rights.

In developing air quality guidelines, the Ministry aims to develop an approach that actively protects and considers Maori Treaty rights as well as sections 6(a), 7(e) and 8 of the Resource Management Act. In particular, it is considering:

1. the wider effects of air quality on plants, animals and other materials including water and soil
2. how to improve the ability and opportunity of Maori to effectively control, manage, regulate air quality within their rohe (boundaries) and according to their own cultural preferences.

It is thought that many airborne pollutants have a greater affect on particularly vulnerable sectors within the New Zealand population. Maori who predominantly suffer from more severe cases of respiratory and cardiovascular disease and



Ministry for the
Environment
Manatū Mō Te Taiao

Head Office
Grand Annexe
84 Boulcott Street
PO Box 10-362, Wellington
Phone (04) 917 7400
Fax (04) 917 7523
www.mfe.govt.nz

North Regions Office
8-10 Whitaker Place
PO Box 8270
Symonds Street, Auckland
Phone (09) 913 1640
Fax (09) 913 1649

South Island Office
Level 3, Westpark Towers,
56 Cashel Street
PO Box 1345, Christchurch 8015
Phone (03) 365 4540
Fax (03) 353 2750
Email sio@mfe.govt.nz

Contaminant	1994 guideline value		Proposed new/ revised guideline	
	Value	Averaging time	Value	Averaging time
Existing contaminants				
Carbon monoxide	30mg/m ³	1 hour	30mg/m ³	1 hour
	10mg/m ³	8 hour	10mg/m ³	8 hour
Particles PM ₁₀	120µg/m ³	24-hour	50µg/m ³	24-hour
	40 µg/m ³	Annual	Withdrawn	
Particles PM _{2.5} (Interim guideline value)			25µg/m ³	24 hour
Nitrogen dioxide	300 µg/m ³	1-hour	200µg/m ³	1-hour
	100µg/m ³	24-hour	100µg/m ³	24-hour
Sulphur dioxide	500µg/m ³	10-min	Withdrawn	
	350µg/m ³	1 Hour	350 µg/m ³	1 hour
	125µg/m ³	24 hour	120µg/m ³	24 hour
	50µg/m ³	Annual	Withdrawn (see guidelines for managing effects on ecosystems)	
Ozone	150µg/m ³	1 hour	150µg/m ³	1 hour
	100µg/m ³	8 hour	100µg/m ³	8 hour
Hydrogen sulphide	7µg/m ³	30 minutes	7µg/m ³	1 hour
Lead	0.5-1.0µg- /m ³	3 month	0.2 µg/m ³ (content of PM10)	3-month moving average, calculated monthly
Flouride	Range of guideline values		See guidance on managing air pollution effects on ecosystems	
New contaminants				
Benzene (year 2000)			10µg/m ³	Annual
Benzene (year 2010)			3.6µg/m ³	Annual
Toluene			190µg/m ³	Annual
Xylene			950µg/m ³	Annual
1,3-Butadiene			2.4µg/m ³	Annual
Formaldehyde			15µg/m ³	Annual
Acetaldehyde			30µg/m ³	Annual
Benzo(a)pyrene			0.0003µg/m ³	Annual
Mercury (inorganic)			0.33µg/m ³	Annual
Mercury (organic)			0.13µg/m ³	Annual
Chromium VI			0.0011µg/m ³	Annual
Chromium (other forms)			0.11µg/m ³	Annual
Arsenic (inorganic)			0.0055µg/m ³	Annual
Arsenic (Arsine)			0.055µg/m ³	Annual

asthma may be particularly affected. The Ministry for the Environment, in developing air quality guidelines, will need to develop an approach that actively protects and considers Maori health factors.

We recognise the importance of setting safe standards. We will be taking a careful approach to ensure that those most likely to be affected by poor air quality are not harmed. Given the types of health difficulties that are common amongst Maori, the Ministry aims to develop a precautionary approach that will take into account these health conditions.

¹ 'Proposals for Air, Fresh Water and Land' Environmental Performance Indicators - Signposts for Sustainability, The Ministry for the Environment, Wellington, October 1998

² Brief of evidence of Te Ahukaramu Charles Patrick Royal in the Waitangi Tribunal hearing of a claim by RANGIAHO THERESA EVERTON in respect of Maori Radio Spectrum Management and Telecommunications Development (Wai 477)

³ Whata Winiata (pers comm 14 May 1999 - Takapuwhia marae)

⁴ 'Progress towards Closing Social and Economic Gaps between Maori and Non-Maori', The Ministry of Maori Development, Wellington, 1998, p.22

⁵ Ibid. p23

⁶ Ibid. p.24

⁷ Ibid. p.25

⁸ Ibid. p.25

⁹ Jackson 1990 p.334

¹⁰ Waitangi Tribunal 1992b p.171

¹¹ Woods 1989 p.3

**Visit our web site at
www.mfe.govt.nz for
more information on
air quality**

**Or contact Caroline Austwick,
email**

caroline.austwick@mfe.govt.nz

phone (04) 917 7400