

Ministry for the Environment  
PO Box 10362  
Wellington 6143  
[air@mfe.govt.nz](mailto:air@mfe.govt.nz)

## **Submission on the Proposed Amendments to the National Environmental Standards for Air Quality from Iris Tschardtke**

This is a submission on the Proposed Amendments to the National Environmental Standard for air quality. My name is Iris Tschardtke,

I would like to submit the following comments:

The following is stated in the MfE discussion document:

### ***“4.4.1 Additional ambient standards***

*The TAG recommended considering an additional annual PM<sub>10</sub> standard as well as additional daily and annual standards for particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>). This is because the majority of health research in recent years has focused on PM<sub>2.5</sub>, which is reflected in the majority of other countries' approaches to air quality standards. The TAG was sufficiently concerned at being perceived to fall behind other countries to make these recommendations for additional air quality standards despite them being outside the scope of the review. “*

4.4.1 of the discussion document does not reflect the reasons behind the recommendation to implement standards for PM<sub>2.5</sub>. It is not about “being perceived to fall behind” it is about the protection of health in New Zealand. I refer to the Report of the Air-Quality Technical Advisory Group Section 4.4:

*“There are several good reasons for adopting a PM<sub>2.5</sub> standard, including PM<sub>2.5</sub> health effects are greater than PM<sub>10</sub>; PM<sub>2.5</sub> sources are more anthropogenic than PM<sub>10</sub> sources and therefore are more easy to control; PM<sub>2.5</sub> is more ubiquitous and therefore more accurately relates to exposure and monitoring; Studies in the United States and Europe show a correlation between levels of particulate matter and the number of people who die each year (the mortality rate). For example, in a study considering 51 populations of over 100,000 people, Pope et al. found an increased life expectancy of around seven months for every 10 µg/m<sup>3</sup> decrease of PM<sub>2.5</sub>. PM<sub>2.5</sub> is becoming the air pollution indicator of choice internationally and the primary pollutant used for epidemiological studies; and PM<sub>2.5</sub> annual and 24-hour standards are required to deal with acute and chronic exposures. The TAG therefore considers there is a good case for the government investigating setting a standard for PM<sub>2.5</sub> levels for New Zealand.”*

The “Discussion” below concerning 4.4.1 of the Discussion document is of even greater concern. Please refer to the underlined statement. Does the Ministry of the Environment really believe it doesn't matter what is measured as long as it does not alter the “activities being undertaken”? Isn't it MfE's responsibility to ensure the focus is on the particle group with the greater negative health impact? Isn't it MfE's responsibility to ensure New Zealanders receive honest, scientifically sound information about the air quality in their catchment?

## **Discussion**

*The World Health Organization (WHO) guideline for PM<sub>10</sub> was based on research developed for PM<sub>2.5</sub> (hence the TAG's recommendations to scope additional air quality standards). The WHO guideline for PM<sub>10</sub> assumes that around 50 per cent of particulate matter is less than 2.5 microns in diameter.<sup>15</sup> New Zealand urban areas are, however, heavily dominated by domestic solid fuel combustion emissions, which have a higher percentage of PM<sub>2.5</sub> winter-time particulate matter is likely to comprise 80 per cent or more PM<sub>2.5</sub>, which means a PM<sub>2.5</sub> standard might be more stringent than a PM<sub>10</sub> standard.*

*However, shifting the focus from PM<sub>10</sub> to PM<sub>2.5</sub> would not materially alter the activities being undertaken by regional councils to reduce air pollution from domestic solid fuel combustion (and transport in Auckland).*

## **Further comments:**

### **Transport**

One of the most effective ways to reduce transport emissions would be a reduction of car traffic. Walking, cycling and the use of public transport (emission reduced only) would greatly improve the health of the population and reduce emissions from car traffic. A holistic approach by MfE, the Ministry of Health and the Ministry of Transport would be very desirable and more sustainable than increasing the frequency of particulate matter exceedances.

### **Education**

It is disappointing that the Ministry is happy to "increase" the death caused by air pollution but does not feel responsible for more targeted education in relation to air quality. Targeted education can significantly change the mindset of people. It needs to be communicated that a high percentage of the emissions from fires/wood burners will end up in the houses. People in hardship situations should get a subsidised alternative like a heatpump. This subsidy is long-term much cheaper and humane than addressing the life-long respiratory health problems of children.

### **Exceptional events**

How many exceedances per annum are due to exceptional events in NZ? If the number is quite insignificant, say <1/annum per airshed then the exceedances due to exceptional events should be excluded but monitored as the short-term health effects do not seem to differentiate between the source of discharge. However if there are areas where the background concentration over a number of months is significantly affected by natural hazards like sandstorms then it seems reasonable to include exceedances due to exceptional events as the community is exposed to a higher risk of negative long-term effects.

### **NZ air quality pattern**

It seems the air quality pattern of airsheds affected by wood fires/burners is quite unique. The winter months show relatively high concentrations of particulate matter and low concentrations for the rest of the year. Does an annual limit address the risks in these catchments? Would a winter/summer timeframe highlight the risks more accurately in these catchments? Is there any research which addresses this pollution pattern and its health effects?

### **Increase of permitted exceedances**

I support the increase of exceedances from 1 to 3 if a standard for PM<sub>2.5</sub> is adopted. An increase of exceedances without monitoring and reporting of PM<sub>2.5</sub> is deceitful and negligent.

**Extend timeline to 2018 (maximum)**

Why? Proactive Councils have implemented their air quality compliance strategy. There are other ways to address the issue of non-compliance. There should be an interim period for Councils which haven't addressed the air quality in their airsheds yet. An extension to the implementation period should be granted based on their air quality compliance strategy which must be submitted by 2012.

**Introduce mandatory offsets for new industry consents in breaching airsheds after 2018**

In support subject to previous comments.

Iris Tschardtke

1 July 2010

Address for service:  
Iris Tschardtke

Telephone:  
e-mail: