



**For now &
our future**

Emission characterisation, interventions and community response in the face of health related evidence

Owen West Air quality scientist

Acknowledgements

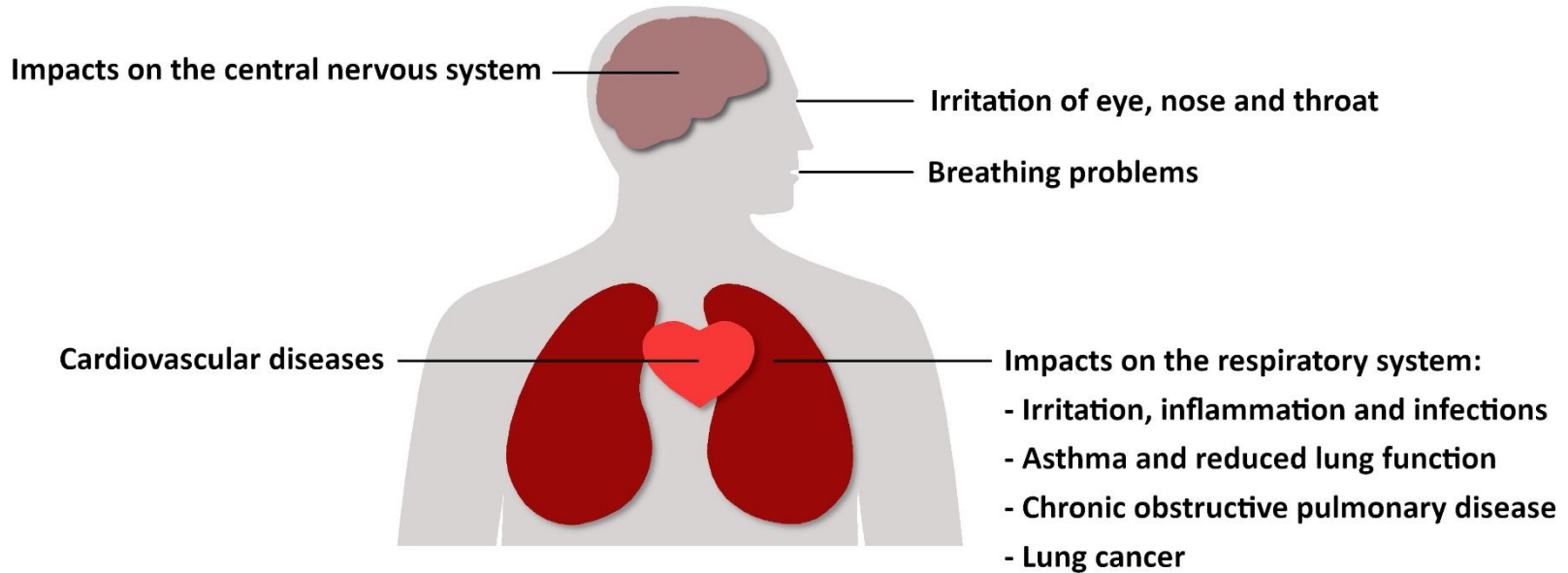


**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

Key messages

- We have the power to make a change
- Regulation alone won't get us there
- Information ≠ behavioural change

Background



(Adapted from European Environment Agency, 2013)

Results

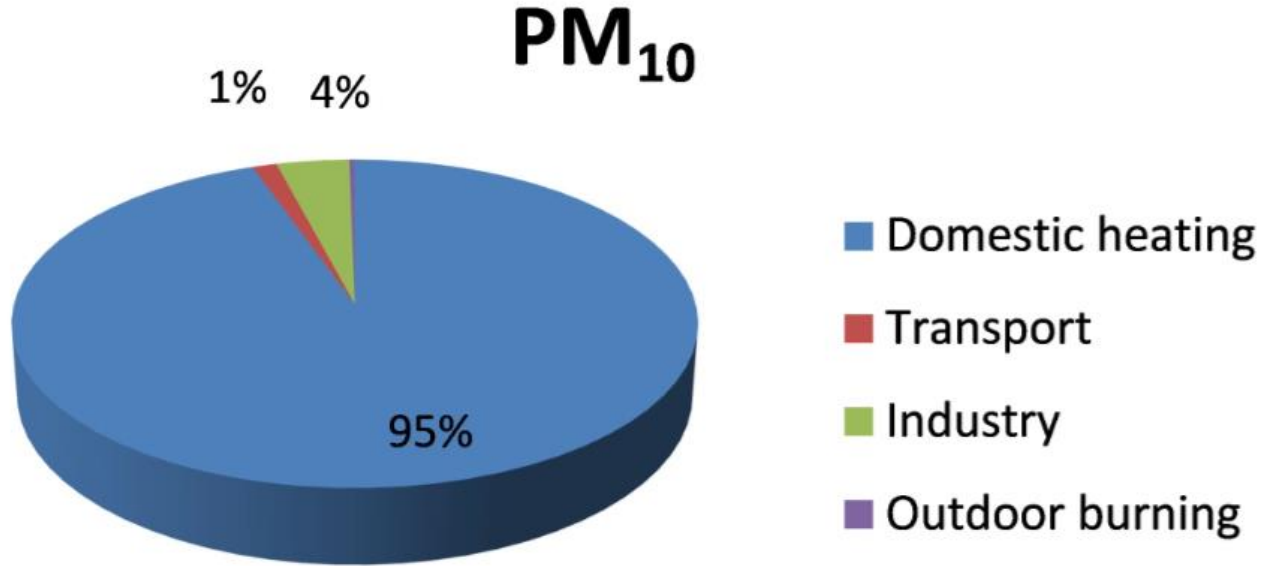


Figure 1: Relative contribution of human caused sources to daily winter PM₁₀ emissions in Invercargill (Wilton, 2015).

Results

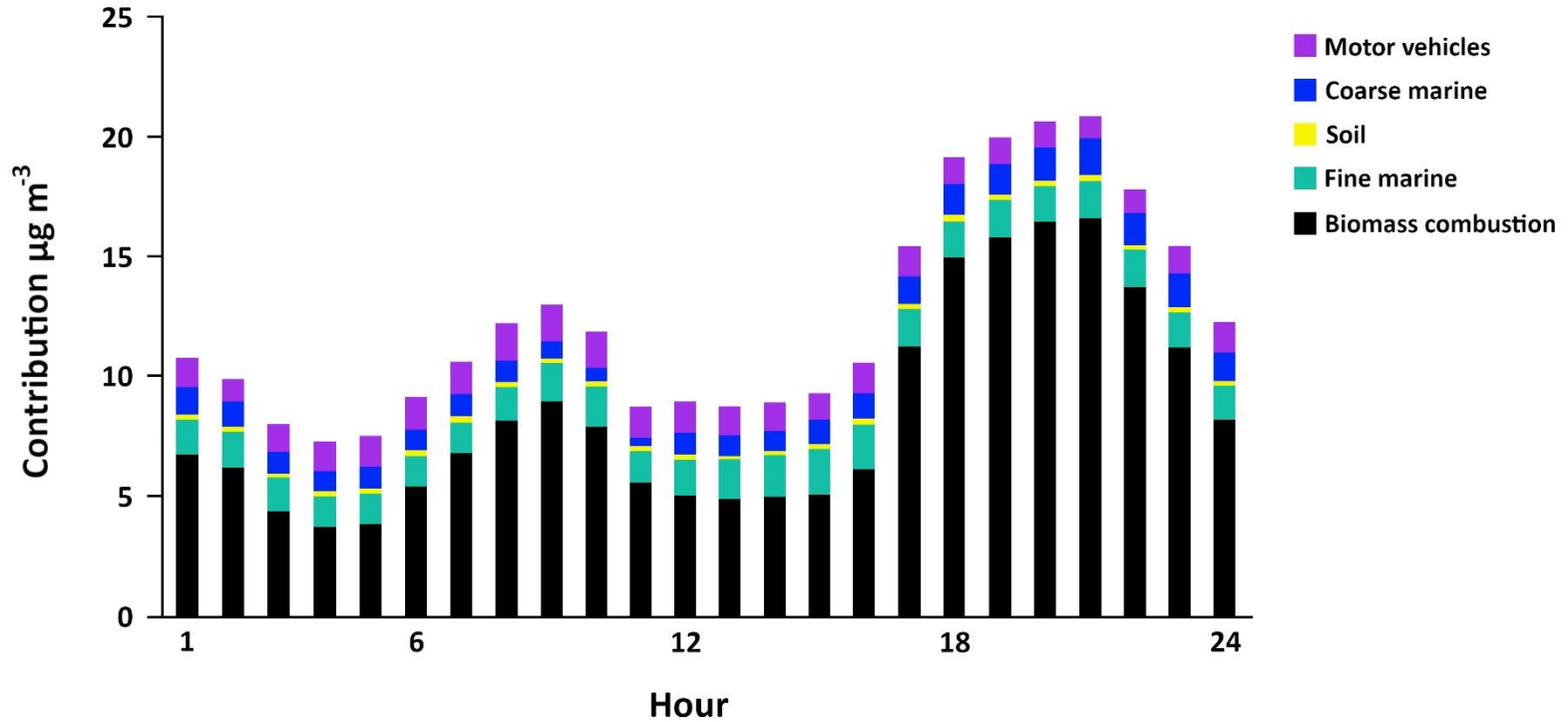
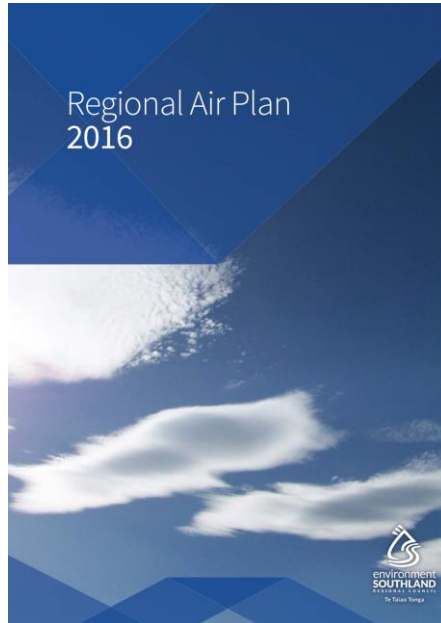


Figure 2: Average hourly source contributions to PM₁₀ in Invercargill (adapted from Ancelet et al, 2015).

Interventions



BreatheEasy Southland Clean Air Loans Good Wood Information Resources Weekly Results Search

Weekly air quality results

Keep your fire burning hot and bright to reduce the smoke coming from the chimney.

Clean Air Loans
Invercargill & Gore

Links and resources

Am I in an airshed?

GOOD WOOD
Approved Supplier

Current PM₁₀ levels

The pollutant PM₁₀ (particulate matter less than 10 microns in diameter) is easily breathed in. To help protect human health the Government has set the average daily limit of PM₁₀ at 50 micrograms/m³.

The current PM₁₀ levels are:

Gore Main Street	47.5 micrograms/m ³ as of 13 Sep 2018 7:20 AM
Invercargill Pomona Street	43.3 micrograms/m ³ as of 12 Sep 2018 8:00 AM

Astive > 50 µg/m³
 Alert > 33-50 µg/m³
 Acceptable > 16.5-33 µg/m³
 Good 0-16.5 µg/m³

environment SOUTHLAND Te Taiao Tonga
Invercargill
AWARUA Synergy
Clean Air Loans
Southland Warm Homes Trust Te Taiao Tonga

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Breathe Easy...

Home heating & outdoor burning

New rules for home heating

Air pollution is a problem in both Invercargill and Gore during winter. At times it reaches alert levels, which means the level of small particles (PM₁₀) exceeds the national standards designed to protect human health. The Government has developed the health-inspired National Environmental Standards for Air Quality (NES) and Environment Southland introduced new rules in the Proposed Regional Air Plan 2014 to address the region's air quality issues.

WHAT DO THE RULES MEAN FOR YOU?

If you live in the **Invercargill** or **Gore** airsheds, any new burner installed must comply with the NES. You will be able to continue to use your existing open fire or non-compliant burner until the dates listed here.

BURNER RESTRICTIONS FOR THE INVERCARGILL AND GORE AIRSHEDS

Open fires	Invercargill and Gore
Burner installed before 1 January 1997	You may use your burner until 1 January 2021. However you must burn only wood from 1 January 2017. After this date all open fires in the Invercargill and Gore airsheds are prohibited .
Burner installed 1 January 1997 - 1 January 2001	Invercargill - You may use your burner until 1 January 2021. However you must burn only wood from 1 January 2017. Gore - You may use your burner until 1 January 2020. However you must burn only wood from 1 January 2017.
Burner installed 1 January 2001 - 1 September 2005	Invercargill and Gore - You may use your burner until 1 January 2021.
Burner installed 1 September 2005 - 1 January 2010*	Invercargill and Gore - You may use your burner until 1 January 2020.
Burner installed 1 January 2010 - 6 September 2014*	Invercargill and Gore - You may use your burner until 1 January 2020.

*If your wood burner was installed after September 2005 it may be on the Ministry for the Environment's list of approved wood burners and not require replacement.

† Find out when your burner was installed by contacting Invercargill City Council or Gore District Council's building consents departments.

environment SOUTHLAND REGIONAL COUNCIL Te Taiao Tonga

Pilot Project

“It’s someone else’s problem”

“It’s my right to burn”

“Fires are nicer than heat pumps”

“Fear of change”

“Comfortable with what I know”

“Coal is cheap”

“My neighbour is worse, pick on him”

“Affordability”

“I’m in a rental”

“Not my problem – my fire burns cleanly”

“It’s always been that way”

Conclusions

- We know the source of our PM₁₀ problem
- Regulation alone will not provide the solution
- We are beginning to understand community response

Behavioural change

- How do we get individuals to consider others?
- What motivators are required?
- Will the method be universally applicable?