



Designing an air quality monitoring network for the Wellington Region

Initial Hurdles:

- **No budget;**
- **No air pollution, no problem?**

Overcoming this inertia required

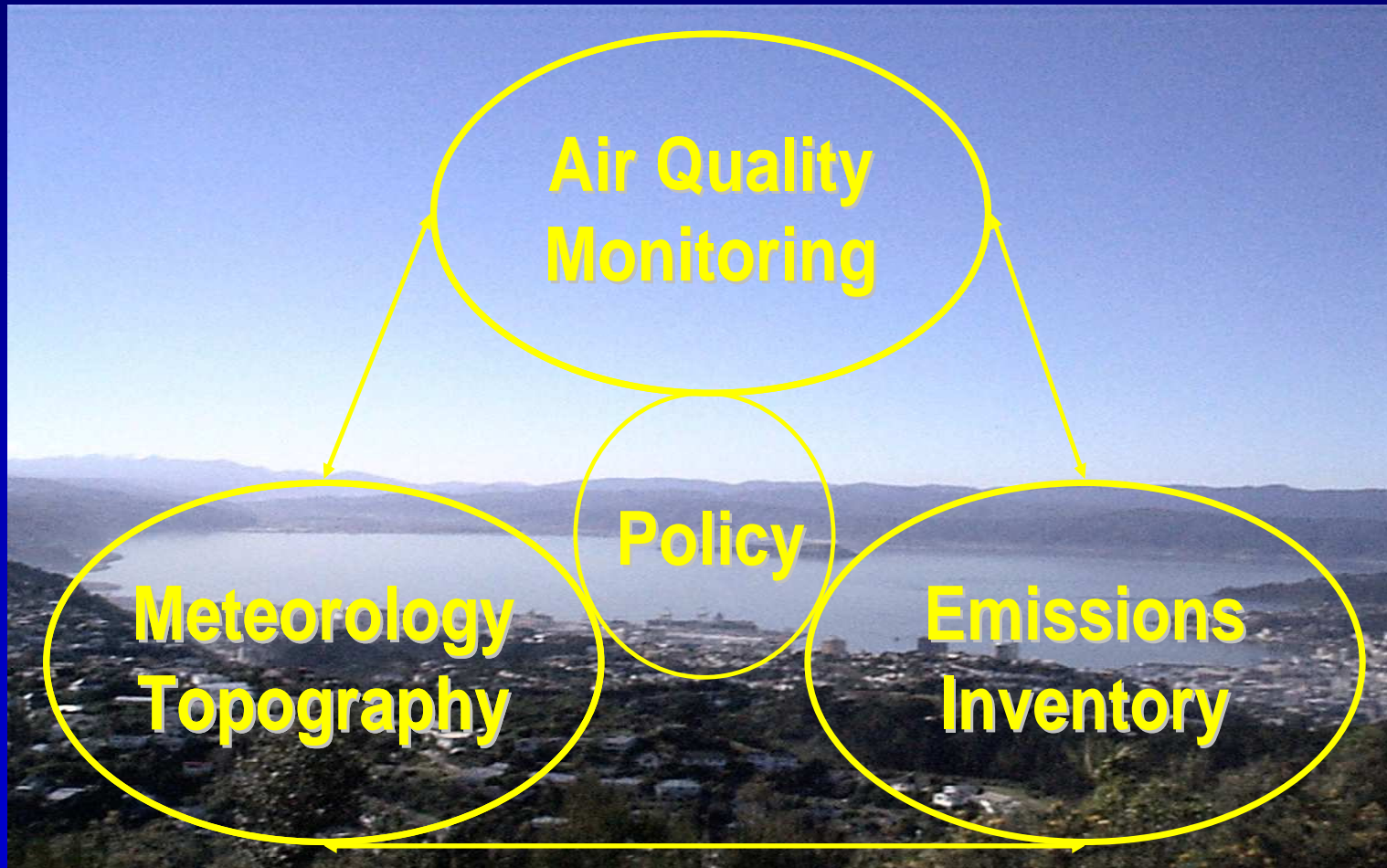
- **some fast talking;**
- **research on historical studies and meteorological assessments;**
- **plus significant arm waving.**

The Council go-ahead based on:

- **Air quality monitoring strategy**
 - **Outlined emissions inventory methodology;**
 - **Air quality screening surveys;**
 - **And an 'Airshed' approach to air quality management.**

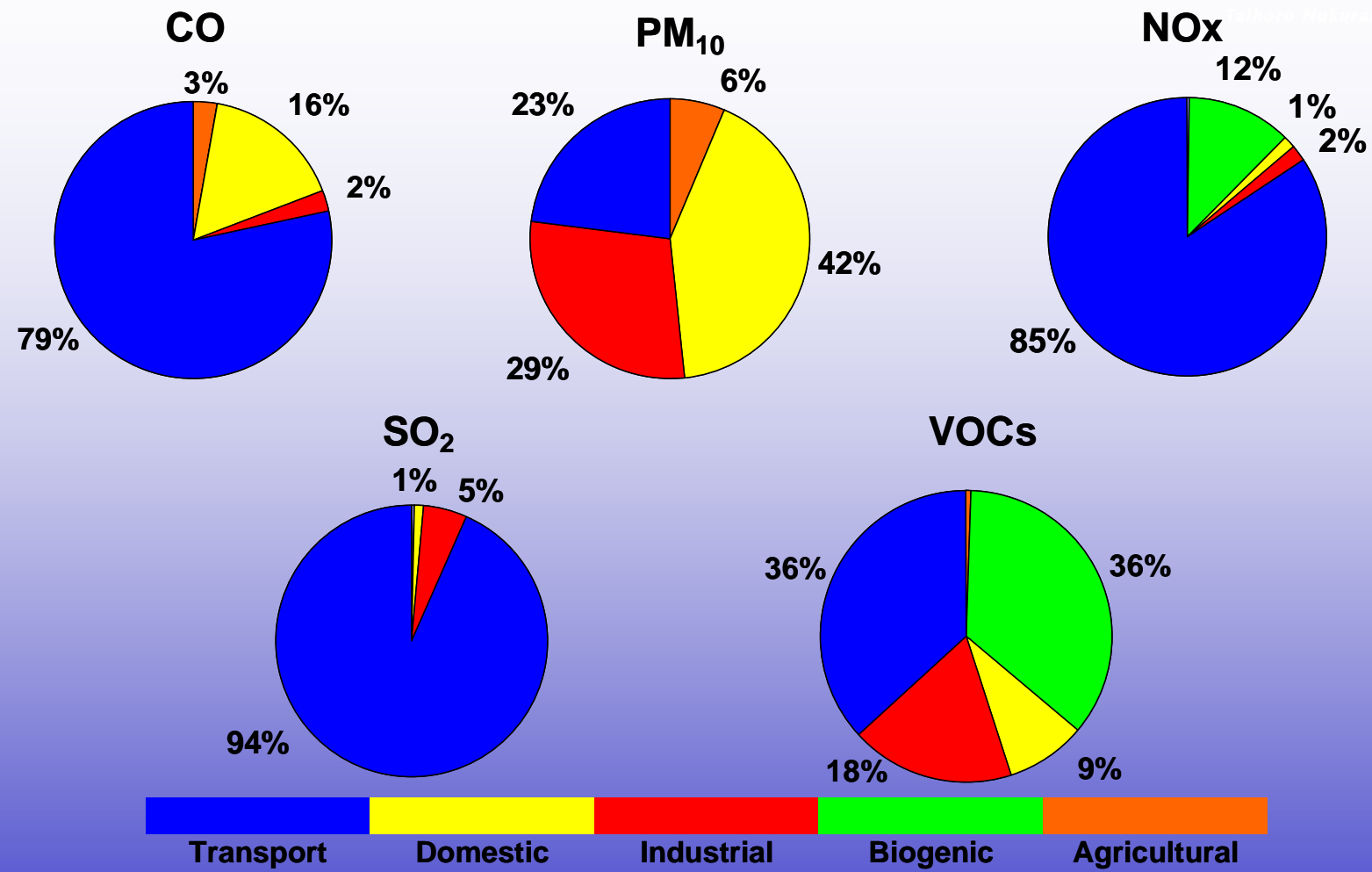
- **No need to reinvent the wheel, beg borrow and steal to suit your needs.**

General approach to air quality management



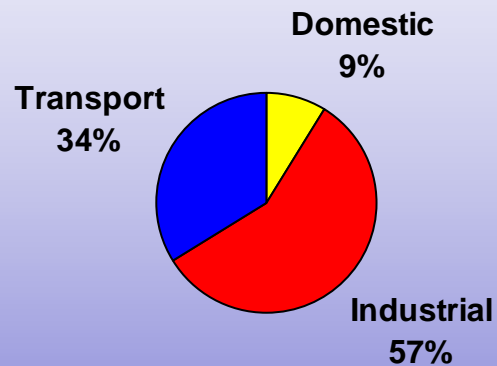
Meteorology and topography play an important role in Wellington region



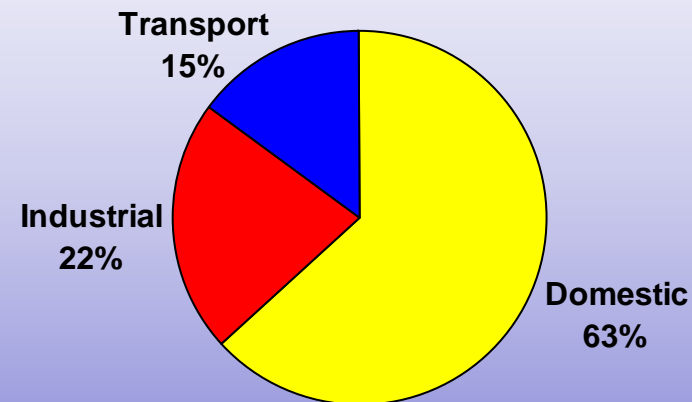


Wellington emissions inventory results (annual)

PM₁₀ Emissions Summers Day

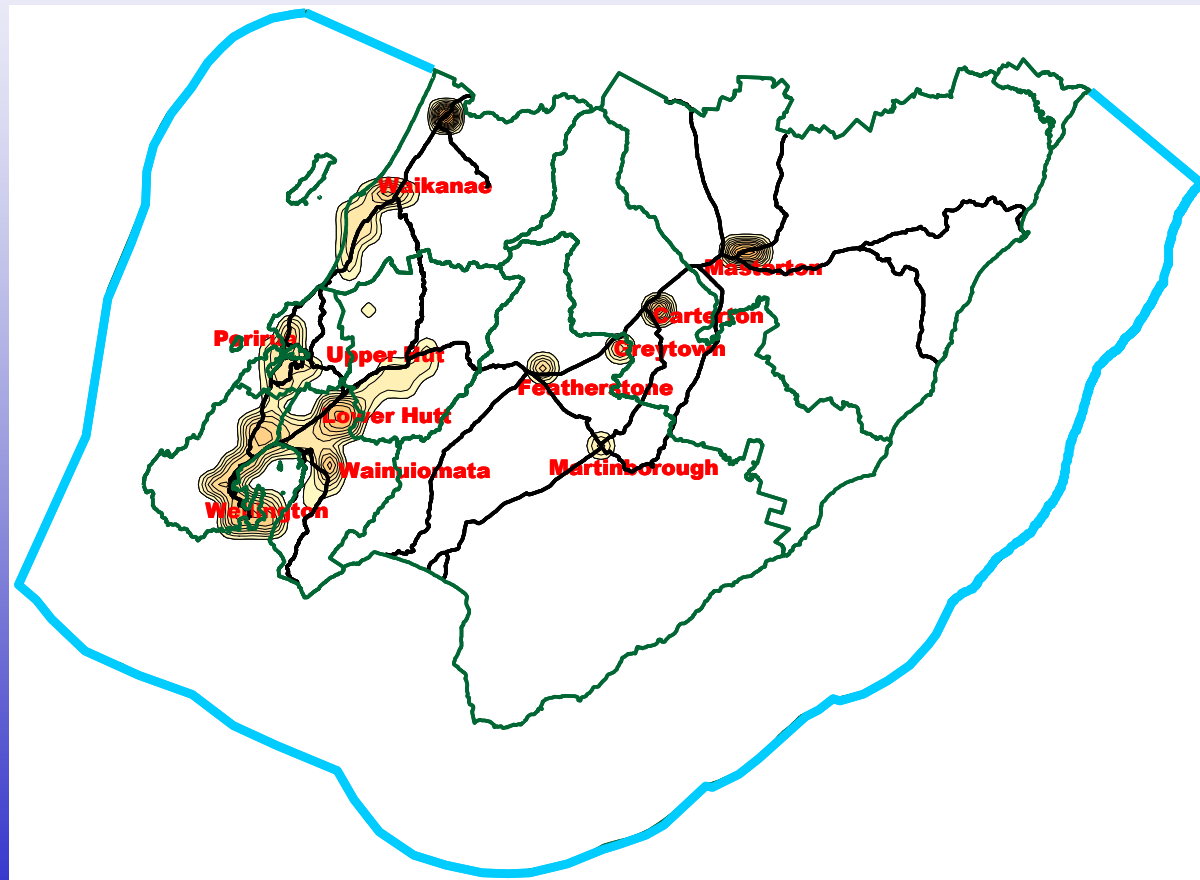


PM₁₀ Emissions Winters Day



Wellington emissions inventory results

PM₁₀ emissions from domestic fires during winter from grid data



Meteorology, topography and emissions inventory:

- **Now we had an idea of ‘hot spots’;**
- **Identified where dispersion was limited;**
- **Which pollutants may be of concern;**
- **What the major contributing sources were likely to be;**

Monitoring locations decided using a proxy for exposure:

- **Residential areas, population close to emission sources (domestic fires);**
- **Roadside locations due to motor vehicle emissions (busy city streets and intersections);**
- **Screening surveys (at least one winter) at various locations.**

The first monitoring station





Air quality Monitoring Network:

- Permanent sites at locations where air quality issues were identified;
- Actual sites dependent on availability and suitability;
- Planning and budgeting are crucial to a successful operation;
- Make sure the infrastructure is in place to save headaches later.



Thanks to Greater Wellington for the good times and the use of images and material.

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