

# Air Quality in Ireland

Report 2024



## Key Messages

Air Quality  
Monitoring

Air Quality in  
Ireland 2024

New EU  
Legislation

Pollutant  
Sources

Call to Action  
(What can I do?)

Coordinated Action

Visualising Air  
Quality

Citizen Science  
CAT

Learn More

Acknowledgements  
and Disclaimer



# Key Messages

## 1. Air Pollution Puts Our Health at Risk

Around 1,700 premature deaths occur in Ireland each year because of poor air quality.

## 2. Ireland is Compliant with 2024 Air Quality Standards

Air Quality in Ireland is generally good and met all legal requirements.

## 3. New Limits will be More Stringent from 2030

A new law was adopted by Europe in October 2024. Meeting the new requirements will be challenging for Ireland.

## 4. Clean Air is Good for Our Health

We need to do more to protect clean air in towns, villages and cities around the country.

## 5. Cleaner Air Requires a Plan

Implement control measures to tackle pollution from traffic and heating.

What can  
we do?

We can all help improve the quality of the air we breathe by:

- Using less solid fuel and cleaner fuels to heat our homes.
- Reducing our use of cars to go to school, work and play; stop idling.

There are supports to encourage us to move to:

Better  
alternatives  
to solid fuel  
combustion



Public  
and active  
transport



Better  
insulated  
homes



Electric  
vehicles



# Air Quality Monitoring

## Stay Informed – What and How we Monitor Air Quality in Ireland

### Key Messages

#### Air Quality Monitoring

#### Air Quality in Ireland 2024

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#### Pollutant Sources

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### The monitoring network

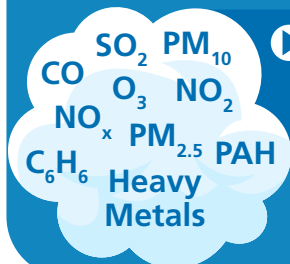
Ireland has 115 air quality monitoring stations that check the quality of the air we breathe. These stations are run by the Environmental Protection Agency (EPA), in partnership with Local Authorities and other organisations.

The EPA shares up-to-date real time air quality information online and gives health advice based on the Air Quality Index for Health (AQIH), which tells you how clean or polluted the air is near you.

You can check your local air quality and get helpful tips at [www.airquality.ie](http://www.airquality.ie).

### What did we monitor

in Ireland's air in 2024



 **CLICK HERE**  
for a  
description  
of each  
parameter



See how to navigate  
[www.airquality.ie](http://www.airquality.ie)

### Dioxins

Residential, backyard burning and illegal burning of waste, are major sources of dioxins. We monitor dioxin levels in the environment by analysing cow's milk. Dioxin concentrations, as in recent years were below European limit values.

 **WATCH THE VIDEO**



# Air Quality in Ireland 2024

## Ireland Meets EU Rules – But there’s More To Do

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### The CAFE Directive

The CAFE Directive is a European legislation designed to improve the quality of the air we breathe. It sets limits on harmful pollutants to help protect our health and the environment. The main goal is to assess air quality and take action to reduce pollution and its harmful effects.

Ireland's most recent air quality measurements in 2024 show that we are meeting the legal limits set by the EU. However, we are not yet meeting the stricter health guidelines from the World Health Organization (WHO), and we're falling behind on targets set in Ireland's Clean Air Strategy for 2026.

There's no completely safe level of air pollution. According to the WHO, even low levels can still harm our health over time.

See how Ireland performed in 2024 in the following tables.

### Selected Pollutants Measured in 2024 and their Adherence to EU Legal Limit Values (CAFE Directive)

Pollutant	Number of stations where parameter monitored in 2024	Compliance with EU limit values
PM <sub>10</sub>	107	No exceedance
PM <sub>2.5</sub>	103	
NO <sub>2</sub>	37	
Ozone (O <sub>3</sub> )	23	
Sulphur dioxide (SO <sub>2</sub> )	15	
PAHs	5	
Heavy metals	5	
Dioxins	22	

### Air Monitoring Trends

Air quality in Ireland is moving in a positive direction although Ireland has not yet met the Clean Air strategy and guidelines set out by the WHO.

### Each Parameter

long-term trends.

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# New EU Legislation

## Ambient Air Quality Directive (2024/2881/EU)

The EU has published a new Ambient Air Quality Directive, key points include:

- ▶ The revised EU Ambient Air Quality Directive entered into force on 20 December 2024.
- ▶ It is required to be transposed into Irish legislation by the 11 December 2026.
- ▶ It aims to gradually align EU air quality standards with WHO health-based guidelines.
- ▶ New and updated air quality standards must be met by 1 January 2030 to reduce premature deaths.
- ▶ The directive is a key step toward achieving zero pollution in the EU by 2050.

### What it means for Ireland:

#### Environment & Health

- ▶ Tighter limits in the air we breathe.

#### Monitoring & assessment

- ▶ Monitoring of new air pollutants – Ultrafine particles and black carbon.
- ▶ Sets out requirements for air quality modelling.

#### Information & Communication

- ▶ Continue to improve public information.

#### Governance & Enforcement

- ▶ Implement control measures to tackle pollution.

New CAFE  
Directive



READ HERE

EU Zero  
Pollution  
Fact Sheet



READ HERE

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## Pollutant Sources

**Even Low Pollution Can Be Dangerous** – Particulate Matter and Nitrogen Dioxide are the most significant pollutants in Ireland.

### Solid fuel

#### Particulate Matter (PM)

##### What is particulate matter (PM): PM<sub>10</sub> and PM<sub>2.5</sub>?

Particulate matter (PM) are tiny particles of solid or liquid suspended in the air. The EPA monitors PM<sub>10</sub> and PM<sub>2.5</sub>.

##### Where does it come from?

Fine particulate matter (PM<sub>2.5</sub>) in Ireland mainly comes from the burning of solid fuels, such as coal, peat, and wood to heat our homes.

##### How will it impact my health?

PM<sub>2.5</sub> is the more important pollutant as it causes most health issues. These tiny particles are inhaled deep into the lungs and cause damage. Chronic exposure can also contribute to stroke and heart disease.

##### When is it at its worst?

PM levels, in our towns, villages and cities, are at their highest during winter because of human activity, with increased burning of solid fuels using fires and stoves for heating.

### Traffic

#### Nitrogen Dioxide (NO<sub>2</sub>)

##### What is nitrogen dioxide?

Nitrogen dioxide is a significant air pollutant (NO<sub>2</sub>).

##### Where does it come from?

The main source of NO<sub>2</sub> in our towns, villages and cities is from traffic (petrol and diesel engines).

##### How will it impact my health?

NO<sub>2</sub> can affect our lungs and breathing.

##### When is it at its worst?

High concentration of NO<sub>2</sub> occurs in our cities, where traffic is heaviest.



[WATCH THE VIDEO](#)

**WATCH**  
Clean air is  
important for  
good health

# Call to Action (What can I do?)

## Cleaner Air – Healthier Lives



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### Reduce Home Heating Pollution (PM)

**Avoid using solid fuels** if you have an alternative cleaner heating system.




**Change how you heat your home** by using cleaner fuel choices.



**Make your home more energy efficient** and more comfortable.



 **Home energy upgrade one stop shop**

**See the effects of solid fuel burning** on the air monitoring network.



 **WATCH THE VIDEO**

### Reduce Car Pollution (NO<sub>x</sub>)



**Leave the car at home** if you can for 1 day a week.



**Carpool** and reduce the amount of cars on the road.



**Take public transport** or walk, or cycle.



**Work from home** for part of your working week.



**Go electric**



**Stop idling**

 **WATCH THE VIDEO**

### Behavioural Change

The EPA has developed a summary on behavioural change in relation to air quality.

Click below to find more information on awareness/knowledge on air quality; and attitudes regarding air quality.

 **CLICK HERE**



# Coordinated Action

## Public Sector Roles in Air Quality

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### Local Authorities



Prioritise allocation of resources to advance enforcement.



Local authorities need to prioritise solid fuel regulation inspections.



Promote retrofitting of houses and transport measures.



Increase awareness of air quality at local level.



Create more and safer footpaths and cycle lanes.



### Policy Challenges



Promote awareness of low smoke fuels.



Implement Clean Air Strategy to reduce air pollution in Ireland.



Maintain and increase investment in clean public transport.



Continue to support policy and investment in active travel.



### Role of the EPA



Drive continuous monitoring, validation, and reporting of Ireland's air quality.



Strengthen collaboration with the Department and local authorities to advance solid fuel regulation.



Continue effective enforcement of air emissions from industrial and waste licensed facilities.



Collaborate with local authorities in maintaining air monitoring sites.



TFI Smarter Travel – National Transport



National retrofitting scheme SEAI grants



## Visualising Air Quality

Mapping air quality using modelling gives us greater insight into air pollution across Ireland

Air quality modelling is an effective way to visualise air quality, filling in the gaps between monitoring stations - detailing how air quality changes over the entire country.


Models developed within EPAs LIFE Emerald Project provide;

- ▶ Daily air quality forecasts,
- ▶ Hourly updated air quality index for health maps,
- ▶ Annual high-resolution maps.

Having these maps puts Ireland at the forefront of compliance with incoming public information requirements. These maps are all freely available through [www.epa.ie](http://www.epa.ie) and on [www.airquality.ie](http://www.airquality.ie).

### The LIFE Emerald Project was a finalist in the EU 2025 LIFE Award



 Read more about LIFE Emerald here

### PM<sub>2.5</sub> pollution over time



Fine particulate matter (PM<sub>2.5</sub>) pollution is largely dependant on a combination of both solid fuel burning and weather. We can see how this pollution changes across Ireland from month to month and year to year, and using air quality modelling.

 Watch how PM<sub>2.5</sub> concentrations changed throughout 2024

 Watch how PM<sub>2.5</sub> concentrations changed from 2019-2024



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# Citizen Science CAT

CLEAN AIR  
TOGETHER

CLEAN AIR  
TOGETHER  
Waterford city

epa

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The EPA's successful citizen science project Clean Air Together (CAT) involves citizen scientists measuring levels of nitrogen dioxide (NO<sub>2</sub>) in their local area. **See full details at [Cleanairtogether.ie](https://cleanairtogether.ie).**

- ▶ Clean Air Together moved to Limerick city in 2024 with 400 citizens, businesses and community groups signing up to measure levels of the traffic-related air pollutant, nitrogen dioxide (NO<sub>2</sub>), in their local area.
- ▶ Results for CAT Limerick city showed 73% of locations sampled were in the lowest category for NO<sub>2</sub> (0-10 µg/m<sup>3</sup>), with a further 25% in the next lowest category (10-20 µg/m<sup>3</sup>).
- ▶ CAT campaigns across all four cities have provided a useful snapshot of NO<sub>2</sub> levels and has given us important data about this air pollutant, in addition to information from the EPA's existing air quality monitoring network.
- ▶ The information gathered through Clean Air Together campaigns is used by the EPA to assist with its air quality modelling and forecasting.
- ▶ Clean Air Together moved to its fifth city, Waterford City, launched on the 25th August 2025.

WATCH  
CAT  
Dublin



WATCH  
CAT  
Cork



WATCH  
CAT  
Galway



CAT  
Limerick



CAT  
Waterford



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If you want more information Go to the EPA  
Air Quality Frequently Asked Questions






CLICK HERE



### USEFUL LINKS



-  Supplementary Information for the 2024 Air Quality Report in Ireland
-  EPA's Air Quality Index for Health (AQIH)
-  Real Time Air Quality Data for Ireland
-  Ireland's State of the Environment Report 2024
-  EPA's Monthly Bulletins
-  Clean Air Strategy
-  Ireland's Climate Action Plan
-  The National Investment Framework for Transport in Ireland
-  Citizen Science in Air Quality

### EU & WHO

-  The Cleaner Air for Europe Directive (CAFE Directive) (2008/50/EC)
-  EEA Report: Europe's Air Quality 2025
-  WHO Air Quality Guidelines
-  WHO: Breathe Life - How air pollution impacts your body
-  EU Air Quality Index for Health

Europe as part of the Green Deal and the EU's zero pollution visions for 2050 is revising its air quality standards to align them more closely with the lower WHO recommendations.

### AIR QUALITY RESEARCH

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