

# National Ambient Air Quality Monitoring Programme 2017-2022

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# Environmental Protection Agency

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

**Regulation:** *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

**Knowledge:** *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

**Advocacy:** *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

## Our Responsibilities

### LICENSING

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities (e.g. landfills, incinerators, waste transfer stations);
- large scale industrial activities (e.g. pharmaceutical, cement manufacturing, power plants);
- intensive agriculture (e.g. pigs, poultry);
- the contained use and controlled release of Genetically Modified Organisms (GMOs);
- sources of ionising radiation (e.g. x-ray and radiotherapy equipment, industrial sources);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

### NATIONAL ENVIRONMENTAL ENFORCEMENT

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by co-ordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

### WATER MANAGEMENT

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

### MONITORING, ANALYSING AND REPORTING ON THE ENVIRONMENT

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFE) Directive.
- Independent reporting to inform decision making by national and local government (e.g. *periodic reporting on the State of Ireland's Environment and Indicator Reports*).

### REGULATING IRELAND'S GREENHOUSE GAS EMISSIONS

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

### ENVIRONMENTAL RESEARCH AND DEVELOPMENT

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

### STRATEGIC ENVIRONMENTAL ASSESSMENT

- Assessing the impact of proposed plans and programmes on the Irish environment (e.g. *major development plans*).

### RADIOLOGICAL PROTECTION

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

### GUIDANCE, ACCESSIBLE INFORMATION AND EDUCATION

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (e.g. *My Local Environment, Radon Maps*).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

### AWARENESS RAISING AND BEHAVIOURAL CHANGE

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

### MANAGEMENT AND STRUCTURE OF THE EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

November 2017

# National Ambient Air Quality Monitoring Programme 2017-2022

## **ENVIRONMENTAL PROTECTION AGENCY**

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## Glossary

**AAMP** – National Ambient Air Quality Monitoring Programme 2017-2022

**AQIH** – Air Quality Index for Health

**CAFE** – Clean Air for Europe Directive (2008/50/EC)

**CCMA** – County and City Management Association

**CE&CS** – Citizen Engagement and Citizen Science

**DCCAE** – Department of Communications, Climate Action and Environment

**EMEP** – European Monitoring and Evaluation Programme

**EPA** – Environmental Protection Agency

**NCAS** – National Clean Air Strategy

**PAH** – Polycyclic Aromatic Hydrocarbons

# Introduction

# 1. Introduction

The World Health Organisation has estimated that ambient air pollution in both cities and rural areas has caused 3.7 million premature deaths worldwide in 2012. Air quality issues in Europe remain worrying, with 4,574,100 years of life lost due to fine particulate matter in 2014. Of this total the estimate for Ireland is 16,800 years of life lost. Exposure to air pollutants poses a considerable threat to current and future generations, strengthening the case for urgent action to both achieve a higher air-quality standard in the EU and for increased localised, up to date air quality information to enable the public to make informed decisions and to better inform national and regional policymakers.

Recognising these facts, the EPA undertook a review of the current state of Air Quality monitoring and information provision in Ireland. The overarching outcome of this review was a decision to develop a new air quality monitoring programme which aims to enhance and build on the current arrangements. The new national ambient air quality monitoring programme (AAMP) is proposed under Section 65 of the EPA Act. Placing the programme on this statutory footing emphasises the importance that the EPA places on the monitoring of Air Quality in Ireland.

While the AAMP was under development the Government announced its intention to develop a National Clean Air Strategy (NCAS). It is envisaged that the AAMP will be an important element of the national work programme under the NCAS and as such the Government and all its agencies are key partners on this programme.

The draft programme was published in November 2016 as a public consultation document and circulated to a number of key stakeholders including government departments and agencies, third level institutions, and charitable organisations. This document presents an overview of the planned programme, taking account of the feedback received.



## 1.1 Objectives of the AAMP

**1) Provide enhanced real-time air quality information to the public across Ireland.**

This programme will upgrade the current air quality information on the EPA website. It will provide information on current air quality to a greatly increased number of people in cities, towns and rural locations across Ireland. It will enable local authorities, policy makers and the EPA to more readily identify and investigate local air quality issues, to ensure monitoring capability is appropriately located and flexible. The increased data from the monitoring network will provide regulators and policy makers with access to far more data, as a greatly strengthened evidence base to inform the development of national policy and local policies towards a future of cleaner air in our cities and towns.

**2) To provide air quality forecasting and modelling –** This programme will give the public a short term ambient air quality forecast to enable all citizens and particularly those in sensitised groups, to plan and make, informed decisions about their activities. Modelling will provide information to local authorities, policy makers and the EPA, on air quality between sampling points. This will provide a more comprehensive picture of air quality in Ireland as well as identifying potential high risk areas.

**3) Place monitoring on a statutory footing –** Placing ambient air monitoring in Ireland on a statutory footing for the first time will mobilise the commitment of resources and provide a framework for the alignment of resources nationwide. Bringing together national air monitoring capacity in this way will pave the way for the strategic development of air quality programmes in Ireland to meet the needs of the people of Ireland.

**4) Progress Citizen engagement –** The success of a national air quality programme in terms of improved air quality and better health outcomes requires the engagement and understanding of the public. The AAMP will develop initiatives to engage with the public, increase awareness of air quality issues and the associated health impacts and empower the public to influence air quality in their local areas and engage in citizen science initiatives.

**5) Increase source apportionment resources –** This programme will provide the flexibility and the source apportionment capacity required to enable the identification of the sources of pollutant loads.

# Overview of the AAMP and Principal Areas of Action

## 2. Overview of the AAMP and Principal Areas of Action

The new AAMP will be built around three key pillars:



The cornerstone of this programme is a greatly expanded national monitoring network providing enhanced real-time information to the public, supplemented by an increased local authority capacity to conduct local monitoring. This network will provide data that describes and is representative of the air quality experienced by people around the country. This is an essential foundation for identifying any air quality issues, managing air quality and sharing air quality information with our citizens, particularly vulnerable groups.

The information generated through monitoring will be augmented by a newly developed modelling and forecasting capability, with the aim of providing an ongoing air quality forecast to the public. Supporting both of these elements will be citizen engagement and citizen science initiatives to encourage greater understanding and involvement of the public in air quality issues.

### 2.1 National monitoring network

At present, air quality monitoring in Ireland is undertaken by EPA from a network of “CAFE” stations, in partnership with a number of local authorities, third level institutions and state agencies (Appendix 1). This monitoring is undertaken primarily to meet the requirements of the Ambient Air Quality and Cleaner Air for Europe Directive (CAFE), the 4<sup>th</sup> Daughter Directive and national implementing regulations. In addition, EPA together with partners in Met Eireann and NUIG operates a smaller network of “EMEP” stations. These stations support the European Monitoring and Evaluation Programme (EMEP) and continuously monitor for transboundary air pollution.

A new national monitoring network will be established which will extend the current CAFE network to provide improved spatial coverage across rural and urban centres. The siting of the stations will be based on the criteria of population size, vulnerability to air quality issues and spatial distribution as detailed in Appendix 2. The network of sites will monitor a range of specified air quality parameters including particulates, heavy metals, inorganic and organic gases. The current and future network is shown in Figures 2.1 and 2.2 and the parameters to be monitored across the network are detailed in Appendix 3. The new network will provide three tiers of data as follows and as detailed further in Appendix 2:

**Tier 1:** The existing CAFE network of monitoring stations, enhanced and fully automated,.

**Tier 2:** This network will consist of the CAFE network, extended with the addition of a further 38 new air monitoring stations. The data collected on this extended network will provide a basis for improved public communication of real-time air quality data.

**Tier 3:** “Local” air quality monitoring at a local level. This monitoring network will be established in partnership with local authorities. It will provide local data for communities as well as contributing to the national air quality picture

Figure 2.1 – Current CAFE Air Monitoring Network 2016

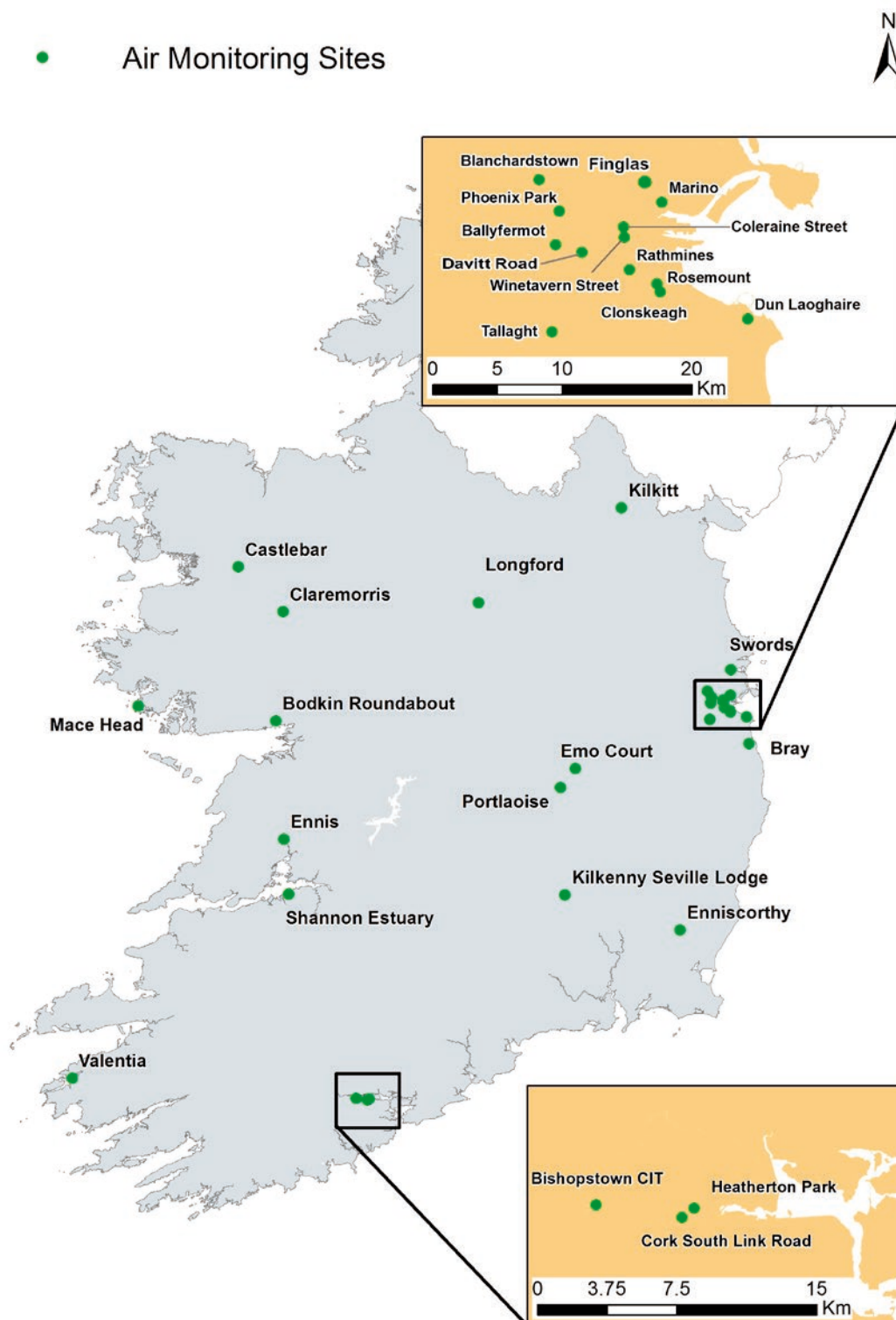
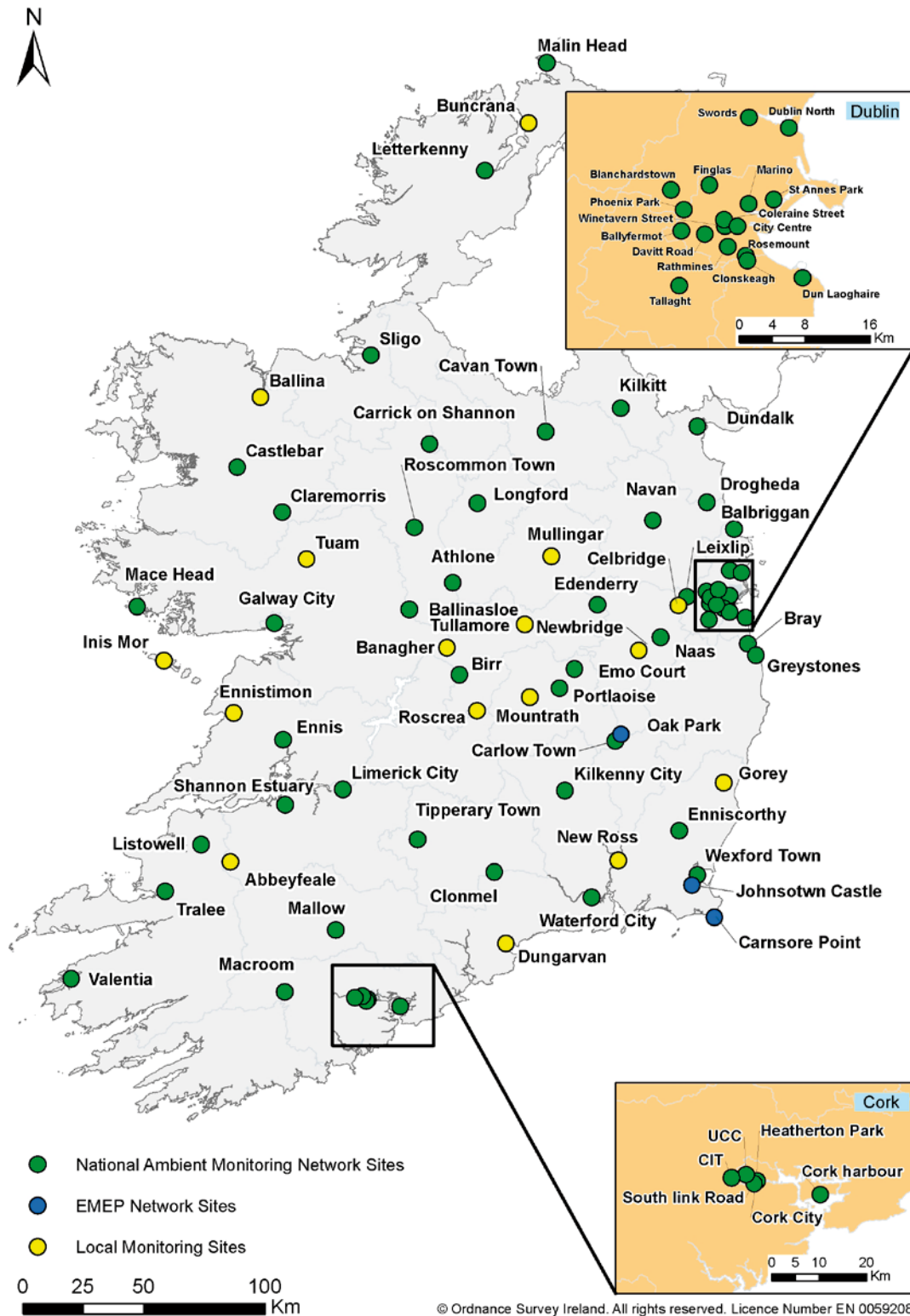


Figure 2.2 – Future national Ambient Air Monitoring Programme network. Logistical difficulties during roll-out may result in minor adjustment to these locations.



**Principal Actions to deliver a new Monitoring Network**

- Liaise with Local Authorities regarding collaboration and siting plans
- Purchase and install monitoring equipment
- Quality check and test equipment and communications links
- Establish data management arrangements

## 2.2 Modelling and forecasting

Modelling and forecasting capacity is an essential complement to the monitoring network and can be a valuable tool to inform general air quality policy development. In line with many countries in Europe there is a growing awareness of the need for Ireland to develop its ambient air quality modelling capability. Through the development of modelling and forecasting EPA will have the opportunity to add further value to the data collected by the new network, in support of the work of local authorities and other partners.

Under the AAMP it is planned that EPA will develop, on a phased basis, the following modelling capability:

- General ambient air quality modelling at urban and regional scales
- Ambient air quality forecast modelling

This capacity will enable the provision of information for locations between monitoring stations and provide the opportunity to identify the source of poor quality air. Modelling will pave the way for the provision for the first time in Ireland, of an operational air quality forecast model. An ambient air quality forecast will inform the public in advance of the predicted air quality and enable choices to be made regarding work and leisure activities; this is particularly important for those who are vulnerable from a health perspective. Through modelling it will be possible to predict the impact of for example traffic management on urban air quality, to provide advice to the public and emergency responders of potential air quality impacts arising from events such as factory fires; development of air quality management plans for problem areas; and on a national scale, linking with meteorological forecasting to offer for example enhanced pollen forecasting and short term air quality outlook.

**Principal Actions to deliver a Modelling and Forecasting capability**

- Establish modelling team and relevant working partnerships
- Purchase modelling software and perform tests with available data
- Liaise with end users to match model outputs with user needs

## 2.3 Citizen engagement and citizen science

Citizen engagement and citizen science (CE&CS) encompasses the many different ways in which citizens are involved in science. Citizens are both recipients of information and important providers of valuable data. The EPA believes that CE&CS provides exciting opportunities for State organisations, scientific groups, institutions and industry to work with citizens to address challenges in environmental protection, policy development and society in general. Since 2015 the EPA has been actively growing its activities in relation to CE&CS. Our intention to continue work in this area is established in the *EPA Strategic Plan 2016-2020 Our Environment, Our Wellbeing* in which Citizen Science is a specific area of action.

In 2016 we successfully co-ordinated a collaboration between EPA, The National College of Art and Design, and INTEL to develop citizen science concepts for Air Quality (<http://www.ncad.ie/gallery-event/view/something-in-the-air>). In parallel with the Citizen Engagement work the EPA plans to develop further citizen science projects in collaboration with education based and private partners.

This new AAMP aims to work with the people of Ireland to raise awareness and understanding of air quality issues and encourage individual participation in improving air quality.

### **Principal Actions to deliver Citizen Engagement & Citizen Science (CE&CS) in Air Quality**

- Establish EPA CE&CS resource
- Engage with partners to trial appropriate technologies
- Build on the achievements of the collaboration with NCAD and Intel
- A programme of CE&CS initiatives in partnership with others

## 2.4 Communicating Air Quality Information

### 2.4.1 Improved Communication of Air Quality

Currently air quality information collected from the existing network is presented on the EPA website in the form of graphs, downloadable datasets and as a colour coded map presentation of the Air Quality Index for Health (Fig 2.3). On the AQIH map Ireland is currently divided into six regions. The regions are Dublin, Cork, large towns, small towns, rural east and rural west. While the AQIH was a major step forward in relation to the provision of near real-time information on air quality and related health risks, the current monitoring network is not sufficiently large to provide information about air quality at a more localised level. The result of this is that the information presented in the AQIH can be of limited value to people with health concerns affected by air quality.

The planned expansion of the monitoring network will generate a more representative data set upon which to enhance the data provided to the public. The improved spatial coverage and the full automation of the network will enable the upgrade of the AQIH to provide more meaningful information for more people. The development of “local” monitoring in partnership with local authorities will even further enhance the provision of localised air quality data.



Figure 2.3 – Screenshot of current AQIH regions as displayed on [www.epa.ie](http://www.epa.ie)



Throughout the implementation of the AAMP, EPA will engage with members of the public and stakeholder groups to find out how best to meet their information needs. It is envisaged that this will include improvements to the AQIH map, a dedicated web platform and other forms of information delivery together with partners such as local authorities, Met Éireann and key stakeholders such as the Asthma Society of Ireland.

A programme of awareness raising is planned to inform all stakeholders of our work, the good quality air that we enjoy in most parts of Ireland, the causes of and health risks associated with poor air quality, and how we can work together to manage air quality. This programme will kick-off in 2017 with a survey of public awareness on air quality matters. This will provide a baseline metric for our future work.

### Principal Actions to deliver improved Communication of Air Quality

- Undertake stakeholder surveys of awareness and understanding of Air Quality
- Develop a communications strategy for Air Quality to include:
  - Engage with stakeholders on information needs – both locally and nationally
  - Develop and implement appropriate communications platforms



## 2.5 Source Apportionment

The Source Apportionment capability developed under the AAMP will enable the determination of the sources of pollutants impacting on the environment and human health. This data can inform ambient air quality policy development and support a more detailed understanding of the origins of poor air quality. It is envisaged that the development of capacity and capability in this area will build upon the highly valuable work carried out by the academic community in this area and which the EPA wishes to both acknowledge and commend.

### **Principal Actions to deliver Source Apportionment**

- Establish a national source apportionment capacity
- Exercise and test source apportionment capability

# Ongoing Monitoring, Reporting, and Supporting actions

### 3. Ongoing Monitoring, Reporting, and Supporting actions

At present, Ireland has established a network of air quality stations to monitor air quality, configured to meet the requirements of the CAFE and 4<sup>th</sup> Daughter Directives. The network monitors only those pollutants required under the EU directives and does not include local monitoring. The EPA is the competent authority for the implementation of the CAFE Directive, including the role of National Reference Laboratory. The EPA is also the specified monitoring and reporting body under this legislation. The EPA manages and co-ordinates current ambient air monitoring activities in Ireland in co-operation with local authorities and other state bodies, complying with strict sampling and reporting requirements.

These commitments will continue to be delivered during the development of the AAMP.

#### 3.1 Actions to maintain/enhance compliance with CAFE and 4<sup>th</sup> Daughter Directive requirements

Ireland's compliance with the Air Quality Directives was reviewed during the development of this programme, the EPA commissioned an independent review of the CAFE network and areas for improvement were highlighted. The recommended actions are incorporated into this programme and will be progressed in phase one.

#### 3.2 Quality Control/Quality Assurance (QA/QC)

The EPA is the National Reference Laboratory under the CAFE Directive and as such is obliged to ensure all instrumentation is compliant with the Directives and that any third party operators are also in compliance. Under the AAMP the scope of accreditation of the National Reference laboratory will be expanded to include metals and polycyclic aromatic hydrocarbons (PAH). This would ensure full compliance with CAFE while improving accuracy and integrity of all monitored parameters

More intensive inter-comparison between the public bodies operating in the network and the EPA will improve the overall quality of the network. If the network is to expand increased equivalence monitoring will be required, as well as assessments of the QA/QC systems of the operators.

#### 3.3 Emerging Pollutants:

The current monitoring network monitors only those pollutants required under the EU Directives, however the monitoring requirements can evolve over time. There is concern at a European level regarding the impact of ammonia and PM<sub>10</sub> on air quality. The extended and enhanced monitoring network described here will ensure that the network will be sufficiently flexible and adaptable to meet the challenge of new and emerging pollutants. This additional capacity will also ensure that the network can respond appropriately to further requirements for additional monitoring sites or pollutants.

#### 3.4 Data Handling and Reporting

The current data handling and reporting activities will be extended to include the expanded network. The increased automation of the network will provide more data, in a more timely manner. Dedicated resources to maintain continuity of service will be a priority in the roll out of the programme.

# Resources and governance

## 4. Resources and governance

### 4.1 National Ambient Air Monitoring Framework

This programme will be delivered on a partnership basis. Its success will rely on the contribution and participation of a variety of players, principally EPA and Local Authorities with funding and strategic input from central government.

A framework structure is planned to oversee the implementation and management of the AAMP and address the overall governance of the programme. Under this framework structure the responsibilities for the management and co-ordination of the monitoring, collection, communication, reporting of data and the quality and technical functions will be agreed and clearly outlined. In the future this framework can provide a forum to develop a consistent approach to local air quality planning across Ireland.

The EPA as National Competent Authority and the Department of Communications, Climate Action and Environment (DCCAE) as the relevant government department, will develop this framework in consultation with the County and City Management Association (CCMA).

#### **Principal Actions to deliver on the National Ambient Air Monitoring Framework**

- Establish forum with DCCAE and CCMA
- Agree a terms of reference for the group
- Agree set of shared objectives and develop appropriate action plans

### 4.2 EPA roles

Within this framework it is envisaged that the EPA as the national competent authority and the specified monitoring and reporting body under legislation will continue in the lead role of co-ordinating and managing all air quality monitoring activities in Ireland. As well as being available for local dissemination by Local Authorities, the data gathered from across the system will be centrally collated and analysed by EPA for the purposes of reporting to EU, UN, modelling and forecasting as well as dissemination to the public and other stakeholders.

### 4.3 Local authority/third party roles

The participation and contribution of Local Authorities is critical to the success of the AAMP. The continuation of the valuable role currently played by some local authorities in the support of local monitoring stations will be essential to the AAMP, and it is an ambition that this will be extended to include the expanded network where appropriate. The EPA will work with the Local Authorities in establishing monitoring sites and providing air quality monitoring data for their local authority area to the national network either as Tier 1, 2 or 3 data.

The division of roles between the Local Authorities and the EPA in relation to these sites will be flexible and determined by resource availability from location to location, and substantial technical support will be provided to Local Authorities under the AAMP through the EPA. It is envisaged that between Local Authorities, sharing of roles will be an efficient and viable option.

These arrangements will be agreed between the partners through the AAMP framework and a programme of engagement with Local Authorities through the CCMA will be undertaken, to encourage involvement in the network, and highlighting the opportunities to address local concerns by the provision of air quality information for their local authority area.

To enable the participation of all local authorities and other third parties in the network the following actions are planned:

- A structure of regional lead local authorities be developed ensuring availability of sufficiently resourced and trained personnel to contribute to the network, such as along the lines of the putting people first regions.
- The EPA will develop guidance, technical procedures and QA/QC protocols for all bodies involved, host workshops and an annual conference as well as providing ongoing support and general guidance.
- All data gathered by the national tiered monitoring network will be transferred to the EPA together with localised communication of near real-time data.
- Local Authority needs will be considered and catered for in the development of EPA web-based maps and information so that local data can be displayed on local websites in a format consistent with the national picture.
- The national ambient air monitoring framework can provide a forum to develop a consistent approach to local air quality planning.

# Timeline for delivery

## 5. Timeline for delivery

The AAMP is an ambitious programme and its delivery is planned to take place over 5 years. The work programme will commence in mid-2017 with the phased roll out of upgrades to existing monitoring stations and enhancement of the monitoring network. As this element of the programme progresses the modelling and forecasting, and citizen engagement aspects will be commenced, with a view to all components of the programme being addressed over the life of the project. The phased roll out of the programme will enable the EPA and its partners to grow capacity and apply early learnings, to maximise effectiveness and resource efficiency.

2017-2022

### Phase 1:

- Commence Monitoring Network enhancement
- Build technical capacity
- Develop governance framework with network partners



### Phase 2:

- Continue Monitoring Network enhancement.
- Commence Modelling and Forecasting development
- Review and develop programmes of public engagement



### Phase 3:

- Complete roll out of enhanced Monitoring Network.
- Apply Modelling and Forecasting capacity to inform policy and health advice
- Deliver enhanced public information on local air quality



# Appendices

## Appendix 1 – Current partners in the national ambient air monitoring and EMEP networks

Zone	No. of Stations	Geographical area	Operators
<b>A</b>	14	Dublin	EPA, Dublin City Council**
<b>B</b>	3	Cork	Cork City Council, Cork Institute of Technology
<b>C</b>	5	Large towns (population>15,000)	EPA, Public Analyst's Laboratory Galway
<b>D</b>	7	Remaining area of Ireland	EPA, Met Éireann, National University of Ireland Galway (NUIG)
<b>EMEP</b>	6*	All four provinces	Met Éireann, NUIG, Teagasc, EPA

\* Two EMEP stations also form part of the Zone D network.

\*\* Dublin City Council conduct monitoring on behalf of the four Dublin local authorities

## Appendix 2 – National Monitoring Network – 3 Tier Structure

### **Tier 1: The existing CAFE network of monitoring stations, enhanced and fully automated, and integrated with the current EMEP network.**

The existing CAFE Directive network monitoring stations will be enhanced and automated to provide additional real time Air Quality data, and will incorporate the stations that are established under the European Monitoring and Evaluation Programme (EMEP)

Data from Tier 1 will continue to meet Ireland's air monitoring requirements under the CAFE and 4<sup>th</sup> Daughter Directives.

### **Tier 2: An expanded Air Quality Index for Health (AQIH) network**

This network will consist of the existing CAFE Directive network and EMEP stations as outlined in Tier 1, augmented with the addition of a further 38 new air monitoring stations.

This expanded network will represent a doubling of Ireland's current air monitoring capacity. It will provide a basis for a significant improvement in the provision of accessible real-time air quality data to the public.

Data from Tier 2 will be communicated to the public via an upgraded AQIH system. The criteria for the selection of Tier 2 AQIH monitoring stations, detailed in Figure 2.2, are as follows:

- Inclusion of all urban areas with populations greater than 15,000. The rationale for inclusion of these areas is to provide information to the public on air quality in those areas of highest population density.
- A representative number of Zone D towns, chosen from urban areas highlighted in the North South Ministerial Council Residential Solid Fuel Study as having the highest estimated PM<sub>10</sub> emission density. Those areas with an emission density greater than 800 µg/ha were given specific priority.
- Further selected air monitoring locations chosen to provide geographical representativeness.
- Provision of further information on air quality in Dublin and Cork as our largest urban centres of population.

### **Tier 3: "Local" air quality monitoring data at a local level.**

This monitoring network will be established in partnership with local authorities. It will provide local data for local communities as well as contributing to the national air quality picture. It is envisaged that airborne particulate matter (PM) monitoring at local level will be increased to an initial 14 sites. These local sites will provide monitoring that is appropriate to local requirements, and will be operated and maintained by local authorities and other public bodies with the support of the EPA. The data generated will supplement the Tier 2 network by providing local air quality data relevant to local communities.

All data from the Local network will be collated and analysed by the EPA and will inform decisions on the location of monitoring stations and any requirement to carry out investigative work. These 14 local stations may be supplemented in due course to meet particular local air quality information requirements.

The recommended locations for local monitoring are selected on the basis of Tier 2 criteria b and c. Tier 3 locations are detailed in yellow on figure 2.2.

## Appendix 3 – Pollutants requiring measurement under the CAFE Directive and 4<sup>th</sup> Daughter Directive

Classification of Pollutant	Pollutant	Limit or Target Value Specified?
<b>Inorganic Gases</b>	Nitrogen Dioxide and Oxides of Nitrogen	Yes
	Sulphur Dioxide	Yes
	Carbon Monoxide	Yes
	Ozone	Yes
<b>Particulate Matter</b>	PM10	Yes
	PM2.5	Yes
<b>Volatile Organic Compounds</b>	Benzene	Yes
	Other Ozone Precursor VOCs <sup>1</sup>	No
	Benzo(a)pyrene	Yes
	Other PAH <sup>2</sup>	No
<b>Heavy Metals</b>	Lead	Yes
	Arsenic	Yes
	Cadmium	Yes
	Nickel	Yes
	Mercury	No
<b>PM2.5 Speciation</b>	Anions and Cations	No
	Elemental Carbon/Organic Carbon	No

<sup>1</sup> Member States must measure appropriate ozone precursor VOCs. A list of 31 compounds (including benzene) recommended for measurement is given in Annex X of the CAFE Directive.

<sup>2</sup> Member States must measure additional PAH including at a minimum the six listed in Article 4 of the 4<sup>th</sup> Daughter Directive

# An Gníomhaireacht um Chaomhnú Comhshaoil

Tá an Gníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ó éifeachtaí díobhálacha na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

**Rialú:** Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gcloíonn leis na córais sin.

**Eolas:** Soláthraimid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírthe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.

**Tacaíocht:** Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaol atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaol inbhuanaithe.

## Ár bhFreagrachtaí

### CEADÚNÚ

Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:

- saoráidí dramhaíola (*m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola*);
- gníomhaíochtaí tionsclaíocha ar scála mór (*m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiún chumhachta*);
- an diantalmhaíocht (*m.sh. muca, éanlaith*);
- úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (*OGM*);
- foinsí radaíochta ianúcháin (*m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha*);
- áiseanna móra stórála peitiril;
- scardadh dramhuisce;
- gníomhaíochtaí dumpála ar farraige.

### FORFHEIDHMIÚ Náisiúnta i Leith Cúrsaí Comhshaoil

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdaráis áitiúla agus le gníomhaireachtaí eile chun dul i ngleic le coireanna comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, trí dhíríú ar chiontóirí, agus trí mhaoirsiú a dhéanamh ar leasúchán.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (DTLL), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a idíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

### BAINISTÍOCHT UISCE

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchriosacha agus cósta na hÉireann, agus screamhuisc; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

### MONATÓIREACHT, ANAILÍS AGUS TUAIRISCIÚ AR AN GCOMHSHAOL

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.

- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus na n-údarás áitiúil (*m.sh. tuairisciú tréimhsiúil ar staid Chomhshaoil na hÉireann agus Tuarascálacha ar Tháscairí*).

### RIALÚ ASTAÍOCHTAÍ NA NGÁS CEAPTHA TEASA IN ÉIRINN

- Fardail agus réamh-mheastacháin na hÉireann maidir le gáis cheaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

### TAIGHDE AGUS FORBAIRT COMHSHAOL

- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

### MEASÚNACHT STRAITÉISEACH TIMPEALLACHTA

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn (*m.sh. mórfhleananna forbartha*).

### COSAINT RAIDEOLAÍOCH

- Monatóireacht a dhéanamh ar leibhéil radaíochta, measúnacht a dhéanamh ar nochtadh mhuintir na hÉireann don radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taisrí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

### TREOIR, FAISNÉIS INROCHTANA AGUS OIDEACHAS

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Faisnéis thráthúil ar an gcomhshaol ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaol (*m.sh. Timpeall an Ti, léarscáileanna radóin*).
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

### MÚSCAILT FEASACHTA AGUS ATHRÚ IOMPRAÍOCHTA

- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

### BAINISTÍOCHT AGUS STRUCTÚR NA GNÍOMHAIREACHTA UM CHAOMHNÚ COMHSHAOL

Tá an gníomhaíocht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inmharthanacht Comhshaoil
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Fianaise is Measúnú
- Oifig um Chosaint Radaíochta agus Monatóireachta Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltáí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair inní agus le comhairle a chur ar an mBord.

**ENVIRONMENTAL PROTECTION AGENCY**

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