

Environmental Protection Agency  
Annual Report and Accounts

2019

## ENVIRONMENTAL PROTECTION AGENCY

The 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:** *Implementing regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

**Knowledge:** *Providing high quality, targeted and timely environmental data, information and assessment to inform decision making.*

**Advocacy:** *Working with others to advocate for a clean, productive and well protected environment and for sustainable environmental practices.*

### Our responsibilities include:

#### Licensing

- Large-scale industrial, waste and petrol storage activities;
- Urban waste water discharges;
- The contained use and controlled release of Genetically Modified Organisms;
- Sources of ionising radiation;
- Greenhouse gas emissions from industry and aviation through the EU Emissions Trading Scheme.

#### National Environmental Enforcement

- Audit and inspection of EPA licensed facilities;
- Drive the implementation of best practice in regulated activities and facilities;
- Oversee local authority responsibilities for environmental protection;
- Regulate the quality of public drinking water and enforce urban waste water discharge authorisations;
- Assess and report on public and private drinking water quality;
- Coordinate a network of public service organisations to support action against environmental crime;
- Prosecute those who flout environmental law and damage the environment.

#### Waste Management and Chemicals in the Environment

- Implement and enforce waste regulations including national enforcement issues;
- Prepare and publish national waste statistics and the National Hazardous Waste Management Plan;
- Develop and implement the National Waste Prevention Programme;
- Implement and report on legislation on the control of chemicals in the environment.

#### Water Management

- Engage with national and regional governance and operational structures to implement the Water Framework Directive;
- Monitor, assess and report on the quality of rivers, lakes, transitional and coastal waters, bathing waters and groundwaters, and measurement of water levels and river flows.

#### Climate Science & Climate Change

- Publish Ireland's greenhouse gas emission inventories and projections;
- Provide the Secretariat to the Climate Change Advisory Council and support to the National Dialogue on Climate Action;
- Support National, EU and UN Climate Science and Policy development activities.

#### Environmental Monitoring & Assessment

- Design and implement national environmental monitoring systems: technology, data management, analysis and forecasting;
- Produce the State of Ireland's Environment and Indicator Reports;
- Monitor air quality and implement the EU Clean Air for Europe Directive, the Convention on Long Range Transboundary Air Pollution, and the National Emissions Ceiling Directive;
- Oversee the implementation of the Environmental Noise Directive;
- Assess the impact of proposed plans and programmes on the Irish environment.

#### Environmental Research and Development

- Coordinate and fund national environmental research activity to identify pressures, inform policy and provide solutions;
- Collaborate with national and EU environmental research activity.

#### Radiological Protection

- Monitoring radiation levels and assess public exposure to ionising radiation and electromagnetic fields;
- Assist in developing national plans for emergencies arising from nuclear accidents;
- Monitor developments abroad relating to nuclear installations and radiological safety;
- Provide, or oversee the provision of, specialist radiation protection services.

#### Guidance, Awareness Raising, and Accessible Information

- Provide independent evidence-based reporting, advice and guidance to Government, industry and the public on environmental and radiological protection topics;
- Promote the link between health and wellbeing, the economy and a clean environment;
- Promote environmental awareness including supporting behaviours for resource efficiency and climate transition;
- Promote radon testing in homes and workplaces and encourage remediation where necessary.

#### Partnership and networking

- Work with international and national agencies, regional and local authorities, non-governmental organisations, representative bodies and government departments to deliver environmental and radiological protection, research coordination and science-based decision making.

#### 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 advisory committees who meet regularly to discuss issues of concern and provide advice to the Board.

ENVIRONMENTAL PROTECTION AGENCY

EPA ANNUAL Report 2019

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The layout of this report has been structured and aligned to reflect the EPA Strategic Plan 2016–2020: *Our Environment, Our Wellbeing*.



# Key Statistics — 2019 in Numbers

## AUTHORISATIONS

**132**

environmental  
authorisations  
issued

**80**

authorisation  
amendments  
completed

**1,313**

radiation licences (229 licences and 1084 registrations)  
and 1,168 technical amendments issued

**62**

conclusions on Article 27  
by-product notifications

**4**

End-of-waste  
decisions made

## ENFORCEMENT

**299**

urban wastewater  
and 62 drinking  
water site visits

**1,486**

visits to industrial, waste,  
dumping at sea and  
VOC facilities

**12**

prosecutions heard

**82**

inspections of  
Radiological  
Licensees

**20**

drinking water  
Directions issued to  
Irish Water

**11**

sites on the National Priority  
Sites for Enforcement in 2019;  
the food and drink and waste  
sectors accounted for the  
majority of sites on the list

## CIRCULAR ECONOMY

**58**

Local authorities funded for waste  
prevention initiatives such as public water  
fountains and green festivals.

**400**

people trained on food waste reduction  
through workplace and community-  
based Stop Food Waste Challenges

**50**

resource efficiency assessments as part of  
Smart Farming identified cost savings of  
€6,336 per farm and average GHG emission  
reductions of 10%

**23,000+**

people engaged with the Stop Food Waste  
programme by following social media channels;  
while 2,300 subscribed to receive the quarterly  
e-Newsletter

**800+**

companies and public bodies have  
used the TREE online tool to assess  
resource efficiency performance and to  
generate a tailored action plan for  
improvement

## INFORMATION

**1,160,132**

sessions on [www.epa.ie](http://www.epa.ie)

**40,400+**

Twitter followers

**7,500+**

environmental complaints reported

This includes:

3,600+ via See it? Say it! App;  
2,000+ via National Complaints Line;  
1,800+ direct to EPA (which includes  
608+ about licensed activities and  
20+ about drinking water supplies)

**2,411**

environmental queries  
from the public

**293**

EPA datasets uploaded  
to data.gov.ie  
(35,496 total views)

**149**

information requests  
(84 AIE and 65 FOI)

## AIR QUALITY MONITORING

**19**

new air quality  
monitoring stations  
added to the network



**43**

research reports published:  
Water (8); Climate (17);  
Sustainability (18)





## KEY ENVIRONMENTAL ACTIONS FOR IRELAND ON THE STATE OF THE ENVIRONMENT IN 2016



### SYSTEMIC MESSAGES

#### 1 ENVIRONMENT AND HEALTH & WELLBEING



RECOGNITION OF THE BENEFITS OF A GOOD QUALITY ENVIRONMENT TO HEALTH & WELLBEING



#### 2 CLIMATE CHANGE

ACCELERATE MITIGATION ACTIONS TO REDUCE GREENHOUSE GAS EMISSIONS AND IMPLEMENT ADAPTATION MEASURES TO **INCREASE OUR RESILIENCE IN DEALING WITH ADVERSE CLIMATE IMPACTS**



#### 3 IMPLEMENTATION OF LEGISLATION

IMPROVE THE TRACKING OF PLANS AND POLICIES AND THE **IMPLEMENTATION AND ENFORCEMENT OF ENVIRONMENTAL LEGISLATION** TO PROTECT THE ENVIRONMENT



### TOPIC MESSAGES

#### 4 RESTORE & PROTECT WATER QUALITY



IMPLEMENT MEASURES THAT ACHIEVE ONGOING IMPROVEMENTS IN THE ENVIRONMENTAL STATUS OF WATER BODIES FROM SOURCE TO THE SEA



#### 5 SUSTAINABLE ECONOMIC ACTIVITIES

INTEGRATE RESOURCE EFFICIENCY AND ENVIRONMENTAL SUSTAINABILITY IDEAS AND PERFORMANCE **ACCOUNTING ACROSS ALL ECONOMIC SECTORS**



#### 6 NATURE & WILD PLACES

**PROTECT** PRISTINE AND WILD PLACES THAT ACT AS BIODIVERSITY HUBS, CONTRIBUTE TO HEALTH AND WELLBEING AND PROVIDE SUSTAINABLE TOURISM OPPORTUNITIES



#### 7 COMMUNITY ENGAGEMENT

INFORM, ENGAGE AND SUPPORT COMMUNITIES IN THE **PROTECTION AND IMPROVEMENT OF THE ENVIRONMENT**





## VISION

A clean, healthy and well protected environment supporting a sustainable society and economy.

## MISSION

To protect and improve the environment as a valuable asset for the people of Ireland.

To protect our people and the environment from the harmful effects of radiation and pollution.

## VALUES

### Our Stewardship

We are a trusted, independent and authoritative advocate for the environment.

We make objective decisions based on the best available scientific evidence and information.

We manage our resources effectively and efficiently to deliver value to the public.

### Our Work

We regulate in a fair, proportionate and transparent manner and target those who don't comply.

We make a difference by working with others to foster trust and build networks and partnerships to deliver effective outcomes.

We strive continuously for improvement and excellence through learning and development.

### Our Service

We are innovative, adaptive and open to new and flexible ways of working.

We design and deliver services from the citizen's point of view.

We provide our services in a manner that is competent, courteous and responsive.

### Our Colleagues

We work together to deliver effective outcomes.

We support, trust and value our colleagues and empower each other to make decisions.

We are open and honest with each other.

We constructively challenge and encourage each other to do better.

## WHAT WE DO

### Knowledge

Provide high quality, targeted and timely environmental data, assessments and evidence to inform decision making by citizens, businesses and Government.

### Regulation

Implement effective regulation and environmental compliance systems to deliver good outcomes for people and the environment and target those who don't comply.

### Advocacy

Work with others to advocate for a clean, healthy and well protected environment and sustainable environmental behaviour.

## HOW WE DO IT

Monitoring & Assessment

Research & Expertise

Timely & Accessible Information

Licensing

Enforcement

Guidance

Partnering & Networking

Awareness Raising

Promoting Sustainable Behaviour

# Strategic Goals

## for the period 2016-2020

Goals	Objectives	Outcomes What we will have achieved by 2020
Trusted Environmental Regulator	<p><b>Ensure</b> the ongoing development of a proportionate and effective regulatory approach.</p> <p><b>Align</b> EPA resources to target interventions and reduce environmental risk.</p>	<ul style="list-style-type: none"> <li>▲ A risk-based, responsive regulatory approach that engages stakeholders and protects the environment and people.</li> <li>▲ Reduced environmental risks at EPA-regulated facilities through tailored interventions and by ensuring appropriate financial provisions are in place.</li> <li>▲ Driven the improved delivery and management of water and waste infrastructure.</li> </ul>
Leader in Environmental Evidence & Knowledge	<p><b>Realise</b> the full potential of the EPA's knowledge, skill, expertise and regional presence as key national resources in the protection of the environment and human health.</p> <p><b>Accelerate</b> the provision of timely and tailored information to meet the specific needs of stakeholder groups.</p>	<ul style="list-style-type: none"> <li>▲ More timely evidence-based environmental assessments to inform policy and decision making at national, regional and local levels.</li> <li>▲ Better provision of online, up-to-date and accessible information on the environment to stakeholders.</li> <li>▲ A research programme that addresses knowledge gaps and helps identify solutions to emerging and complex environmental problems.</li> </ul>
Effective Advocate and Partner	<p><b>Strengthen</b> the EPA's capability and capacity to influence, advocate and partner to help achieve a clean, healthy and well protected environment.</p> <p><b>Engage</b> the public in the protection and improvement of the environment.</p> <p><b>Promote</b> a greater awareness of the impact of environment quality on human health.</p>	<ul style="list-style-type: none"> <li>▲ Targeted opportunities to integrate environmental priorities and sustainability into sectoral, economic and social policies.</li> <li>▲ Developed public participation programmes to increase awareness of environmental issues and support the engagement of the public in environmental protection.</li> <li>▲ Collaborated with health agencies and other bodies to realise the benefits of a good environment for health and wellbeing.</li> </ul>
Responding to Key Environmental Challenges	<p><b>Tackle</b> the challenges to deliver improved water quality in Ireland.</p> <p><b>Engage</b> with other strategic partners to promote the development of a holistic national response to climate change.</p> <p><b>Enhance</b> air and radiation protection in Ireland.</p>	<ul style="list-style-type: none"> <li>▲ Effective and resilient structures in place to deliver better outcomes for water quality.</li> <li>▲ Established a climate change secretariat in the EPA as a centre of excellence that supports the national transition to a low carbon economy.</li> <li>▲ Strengthened the air quality and radiation protection frameworks to further protect people and the environment.</li> </ul>
Organisationally Excellent	<p><b>Develop</b> our staff and align our organisation to deliver best environmental outcomes.</p> <p><b>Focus</b> on the development and promotion of organisational health, wellbeing and safety at work.</p> <p><b>Promote</b> a culture of leadership, reform and innovation.</p>	<ul style="list-style-type: none"> <li>▲ Our functions and resources aligned to be responsive and adaptable to meet emerging challenges.</li> <li>▲ Engaged all staff to foster a supportive workplace environment.</li> <li>▲ Enhanced capacity in the area of organisational change and in the use of ICT to support reform and innovation.</li> </ul>



## LIST OF ABBREVIATIONS

<b>AIE</b>	Access to Information on the Environment
<b>AMR</b>	Antimicrobial Resistance
<b>API</b>	Application Programming Interfaces
<b>ARC</b>	Audit & Risk Committee
<b>AQIH</b>	Air Quality Index for Health
<b>BAT</b>	Best Available Techniques
<b>B2C</b>	Business to Consumer
<b>CAFÉ</b>	Clean Air for Europe Directive
<b>CAP</b>	Common Agricultural Policy
<b>CCMA</b>	County & City Managers Association
<b>CLRTAP</b>	Convention on Long-Range Transboundary Air Pollution
<b>CNS</b>	Convention on Nuclear Safety
<b>DAFM</b>	Department of Agriculture, Food and the Marine
<b>DCCAE</b>	Department of Communications, Climate Action and Environment
<b>DHPLG</b>	Department of Housing, Planning and Local Government
<b>EDEN</b>	Environmental Data Exchange Network
<b>EEA</b>	European Environment Agency
<b>EIONET</b>	European Environmental Information and Observation Network
<b>ELV</b>	end-of-life vehicle
<b>EMA</b>	European Medicines Agency
<b>E-PRTR</b>	European Pollutant Release and Transfer Register
<b>ERC</b>	Executive Risk Committee
<b>ESD</b>	EU Effort Sharing Decision
<b>ESRI</b>	Economic and Social Research Institute
<b>EU ETS</b>	European Union Emissions Trading System
<b>EWEN</b>	European WEEE Enforcement Network
<b>F-gas</b>	Fluorinated gas
<b>FOI</b>	Freedom of Information
<b>FPN</b>	Fixed Payment Notice
<b>GMOs</b>	genetically modified organism
<b>HFC</b>	hydrofluorocarbon
<b>HRB</b>	Health Research Board
<b>HSA</b>	Health & Safety Authority
<b>HSE</b>	Health Service Executive
<b>ICT</b>	Information & Communications Technology
<b>IED</b>	Industrial Emissions Directive
<b>IEN</b>	Irish Environmental Network
<b>INAB</b>	Irish National Accreditation Board
<b>IPC</b>	Integrated Pollution Control
<b>IPCC</b>	Intergovernmental Panel on Climate Change

<b>JAI</b>	Junior Achievement Ireland
<b>JPI</b>	Joint Programming Initiatives
<b>LAPN</b>	Local Authority Prevention Network
<b>MI</b>	Marine Institute
<b>MoU</b>	Memorandum of Understanding
<b>mSv</b>	millisievert
<b>MCP</b>	Medium Combustion Plant
<b>NECP</b>	National Energy & Climate Plan
<b>NDCA</b>	National Dialogue on Climate Action
<b>NEC</b>	National Emission Ceiling Directive
<b>NIEA</b>	Northern Ireland Environment Agency
<b>NHEPA</b>	Network of the Heads of Environment Protection Agencies
<b>NHWMP</b>	National Hazardous Waste Management Plan
<b>NIECE</b>	Network for Ireland's Environmental Compliance and Enforcement
<b>NMP</b>	New mutagenesis techniques
<b>NPWS</b>	National Parks and Wildlife Service
<b>NRCS</b>	National Radon Control Strategy
<b>NWPP</b>	National Waste Prevention Programme
<b>ODS</b>	Ozone depleting substances
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>OPW</b>	Office of Public Works
<b>PAN</b>	Prior Annual Notifications
<b>POP</b>	persistent organic pollutant
<b>PCB</b>	polychlorinated bi-phenyls
<b>PRI</b>	Producer Responsibility Initiative
<b>PRTR</b>	Pollutant Release and Transfer Register
<b>RAL</b>	Remedial Action List
<b>RBMP</b>	River Basin Management Plan
<b>REAC</b>	Registration, Evaluation, Authorisation and Restriction of Chemicals regulations
<b>RoHS</b>	Restriction of Hazardous Substances
<b>SEA</b>	Strategic Environmental Assessment
<b>SEAI</b>	Sustainable Energy Authority of Ireland
<b>SLA</b>	Service Level Agreement
<b>UNECE</b>	United Nations Economic Commission for Europe
<b>UNFCCC</b>	UN Framework Convention on Climate Change
<b>WEEE</b>	Waste Electrical and Electronic Equipment
<b>WFD</b>	Water Framework Directive
<b>WWTP</b>	Waste water treatment plant

# TABLE OF CONTENTS

1. DIRECTOR GENERAL'S STATEMENT	
2. REGULATION	6
2.1 Licensing	6
2.2 Enforcement	9
2.3 Guidance	15
3. KNOWLEDGE	18
3.1 Monitoring and Assessment	18
3.2 Research	28
3.3 Timely and Accessible Information	32
4. ADVOCACY	38
4.1 Partnering and Networking	38
4.2 Awareness Raising	44
4.3 Promoting Sustainable Behaviour	47
5. ORGANISATIONALLY EXCELLENT	52
5.1 Organisation structure	52
5.2 Human resources	56
5.3 Information Communications Technology	58
5.4 Environmental Management System	59
5.5 Governance	60
6. APPENDICES	64
6.1 Prompt Payment of Accounts Act 1997	64
6.2 Consultants & Advisers engaged	65
6.3 EPA Publications 2019	66
6.4 Environmental research reports	67
7. FINANCIAL STATEMENTS	69





## 1. DIRECTOR GENERAL'S STATEMENT

The Environmental Protection Agency (EPA) has established itself, over the last quarter of a century, as an independent, authoritative source of information and guidance on protection of the environment. We ensure that regulated activities meet environmental and radiation protection standards. We advocate for the environment and promote the link between health and wellbeing, the economy and a clean environment. As a knowledge provider, we provide the evidence-based science to enable better decision making.

However, we cannot solve Ireland's environmental problems alone and require a societal response to make the necessary transition to a sustainable future.

Our Annual Report and Accounts for 2019 provides an overview of progress made on implementing our current strategy: *Our Environment, Our Wellbeing* and provides details of our activities during the year together with our financial statements. Highlighted below are some of the more notable activities in 2019.





## CLIMATE CHANGE

There is global acceptance that we are in a climate crisis, but it has not arrived suddenly or without warning. Air and water pollution, contamination of land and biodiversity loss continue to be incremental challenges to the environment and our health. Scientific evidence from the EPA and others has informed us that our current production and consumption processes, behaviours and value systems are not compatible with ensuring a sustainable, healthy and prosperous society and environment for the future. Urgent collective action and behavioural change is now required to meet Ireland's long-term goals.

There is good awareness amongst the public of Ireland's environmental challenges. Results of an opinion poll undertaken by the EPA in January 2020 showed that 87 per cent of adults agree that the environment is a valuable asset to the people of Ireland. In addition, 58 per cent of adults placed climate change among the top three most pressing environmental challenges facing Ireland with one third stating that it affects them personally.

In June 2019, the Government set out a course of action to address climate issues over the coming years with the publication of the Climate Action Plan. This measure will facilitate a positive response to the fact that Ireland had ranked as the worst performing EU Member State in its progress towards decarbonisation.

The EPA is addressing climate change challenges by: collating national greenhouse gas emissions and projections; regulating emissions from industrial sectors; supporting climate science research; supporting change in behaviour to promote a circular economy and facilitating the National Dialogue on Climate Action.

The evidence produced by the EPA, throughout 2019, indicated that Ireland would not meet its emissions targets for 2030. Only full implementation of the government programmes, policies and measures will result in a projected decrease in greenhouse gas emissions in the long term. Building upon public awareness and willingness to act will be key to achieving Ireland's long-term goals.

## ENVIRONMENT AND HEALTH

The environment is intrinsically linked to our health and wellbeing. Threats to that environment have a direct impact on the lives of individuals and communities. The EPA plays an important role on behalf of the State in monitoring threats, informing the public and enforcing regulatory measures.

Estimates show there are 1,180 premature deaths in Ireland due to poor air quality. Coinciding with World Lung Day in September 2019, the EPA published its annual air quality report indicating air quality complied with EU legal standards but exceeded guideline values set by the World Health Organization. The two main pollutants are particulate matter from domestic burning of solid fuels and nitrogen dioxide



from fossil-fuelled vehicles in urban areas. Home heating and transport are impacting air quality and affecting people's health which needs to be addressed.

Evidence from the EPA opinion poll, undertaken in January 2020, show that the public are willing to change their behaviour with 62 per cent of adults willing to change to smokeless fuel to heat their home and 43 per cent willing to change to an electric or hybrid vehicle to reduce pollution and greenhouse gases.

The EPA continued to strengthen the capacity and capability of the air quality network, under the National Air Quality Monitoring Programme 2017–2022, adding 19 new monitoring stations in 2019, bringing the total across Ireland to 69.

In Ireland, research indicates up to 300 cases of lung cancer each year are linked to the radioactive gas Radon, the leading cause of lung cancer after smoking. Legislation introduced in 2019 requires employers in high radon areas to test their workplaces and reduce the level of radon to protect employees, if above the national reference level. On European Radon Day in November 2019, the EPA held a public awareness campaign advising householders, affected by high levels of radon, on how to take urgent action to reduce their exposure and protect themselves and their families.

Poor air quality and radon in our living and working environments pose a significant threat to human health. Implementing the transport options outlined in the Government's Climate Action Plan and a move to cleaner ways of heating our homes will address outdoor and indoor air quality. Further roll-out of the National Radon Control Strategy will also ensure that premature deaths can be avoided.

## WATER

Ireland has committed to protect and improve the quality of our aquatic environment – rivers, lakes, groundwaters, estuaries and coastal waters. However, in our Water Quality in Ireland report published in December 2019, the EPA found that the quality of our aquatic environment is declining after a period of relative stability and improvement. The EPA finding that we are continuing to see a loss of the pristine ('best of the best') river water bodies is stark. There are now just 20 pristine river sites, down from over 500 sites in the late 1980s.

EPA analysis also shows that when corrective action is taken we can address pressures on water quality. As such, the science and techniques are available to restore damaged waterways, but prevention of further damage must be a priority.

In May 2019, the EPA reported on the quality of bathing water for 2018 welcoming a small improvement on previous years – 94 per cent of identified bathing waters met at least the minimum EU standards with over 100 beaches classified as excellent.

Some areas of the country continue to see the release of raw or inadequately treated sewage into the environment, posing a risk to public health. In November 2019, the EPA reported on waste water treatment in 2018, finding that sewage in 36 towns and villages was released into the environment every day without treatment.

Furthermore, faulty on-site wastewater systems in households, such as septic tanks, continued to pose a threat to health from contamination of private wells and water quality in local rivers. In July 2019, an EPA review of over 2,000 inspections by local authorities found many systems inspected failed because they were not built or maintained properly.

The underlying problem is a lack of adequate treatment infrastructure. Investment in treatment systems at a national scale will resolve this legacy issue along with improved maintenance of such systems. An anticipated expansion of the grant scheme to fix problems in household treatment systems may help to address issues in the coming years.

In September 2019, the EPA published a report on the quality of drinking water in public supplies for 2018 and found that although compliance was high the incidence of *Cryptosporidium* detections had increased. The Boil Water Notice relating to the Leixlip water treatment plant issued in November 2019, which affected over half a million consumers, highlighted an ageing system vulnerable to shocks with the potential to harm people's health. To protect public health, water treatment plants must be made resilient and properly and effectively operated. Those plants without appropriate treatment for *Cryptosporidium* need to be prioritised for investment.

In general, Ireland enjoys strong compliance with the quality requirements in public water supplies. However, where issues have arisen the EPA has taken action and continues to ensure public health is a priority at all times.

## LICENSING AND ENFORCEMENT

A primary function of the EPA is environmental regulation including licensing facility expansions and greenfield investment activities across a range of industries including waste, pharmaceutical and the power sector. In carrying out this role, the EPA ensures that industrial activities must meet certain standards and are closely regulated based on their potential risk to the environment. Facilitated by an improved online licensing system, the number of licensing decisions continued to increase, rising to 132 decisions in 2019 compared to 94 the previous year.

The EPA continues to regulate for a circular economy through by-product and end-of-waste notifications. In 2019, new guidance related to soil and stone by-product was published following public consultation.

At the end of March 2019, the EPA transitioned radiation licensees to a new risk-based form of authorisation, facilitating more effective regulation of sectors that pose the highest risks.

In July 2019, the EPA reported overall good levels of compliance by industrial and waste licensees. In addition, complaints about licensee activities reduced to 608 in 2019 compared with 799 the previous year. Over half of the complaints received related to odour, with about a quarter related to noise and over one third of all complaints related to just three sites.

Licensed industrial and waste facilities which consistently fail to meet environmental standards are targeted by the EPA. There were 833 EPA licenced industrial and waste facilities at the end of 2019 of which 11 were identified as National Priority Sites for Enforcement.

A review by the EPA in 2019 of local authority enforcement shows overall good performance in undertaking their environmental enforcement functions. However, there are areas where improvements are needed. In particular, more focus is needed on the enforcement of waste segregation in households and businesses, along with an increase in farm and air quality inspections.

In December 2019, the EPA issued guidance to assist facilities comply with financial provision requirements to cover the environmental liabilities associated with potential incidents and acknowledged that over the past five years €700 million of financial provision was secured.

Overall, the EPA has led the implementation of a strong enforcement system that clearly identifies the polluters that pose the biggest risk. Resources are allocated on this basis and it allows for an efficient and transparent system. Public and stakeholder engagement continues to be an important part of this work and the role of the public in assisting with information and observation is recognised and encouraged.

## WASTE

Waste and its management can have a significant impact on our environment. It is a challenge that has been increasing in recent years and requires co-ordinated action to shift to a more sustainable society.

The EPA leads on the National Waste Prevention Programme which supports enterprises, households and the public sector to prevent waste and drive the circular economy in Ireland.

In July 2019, the EPA published information about waste packaging management. The figures indicate that the generation of waste packaging remained high. While recycling rates were high for some waste streams, including glass and wood, recycling levels have levelled off over the last number of years. The figures show that further measures will be needed to ensure that packaging recycling levels don't stagnate.

Of particular concern is the level of plastic packaging and the fact that recycling rates appear to have plateaued in recent years, at around 34 per cent. EPA data indicates that there are challenges ahead in meeting future EU targets and the ambition of the EU Plastics Strategy. Preventing this waste in the first place will be an important component of Ireland's response if we are to achieve our goals.

In August 2019, the EPA published environmental data indicating the positive trend in sending hazardous waste for recovery rather than disposal.

## CIRCULAR ECONOMY

The EPA-led National Waste Prevention Programme (NWPP), implemented a reviewed programme in 2019 to strengthen its activities to support national-level, strategic programmes to prevent waste and drive the circular economy in Ireland. In January 2019, the EPA announced a three-year strategic partnership with The Rediscovery Centre to promote, through education and demonstration, the 'rediscovery' of waste materials through reuse, redesign and repair of clothes, paint, furniture and bicycles. This was followed later in the year with a new strategic partnership (2020-2022) with Irish Manufacturing Research for CIRCULÉIRE, the National Platform for Circular Manufacturing. This is a landmark activity for Ireland which will deliver at scale for the circular economy through a public-private partnership.

The NWPP launched its annual Green Enterprise: Innovation for the Circular Economy Funding programme in April 2019. This €600,000 funding opportunity supports innovators to develop and demonstrate business-ready solutions in areas of national importance such as food waste prevention, construction & demolition waste and plastics.

The EPA led a national campaign on food waste in June, followed by an EPA-hosted forum which brought together business and policy leaders from across the food supply chain. In addition, an educational resource pack was issued to support over 20,000 Junior Certificate students to learn about sustainable living through the Home Economics curriculum.

Results of the opinion poll undertaken by the EPA in January 2020 showed that 78 per cent of the public believe they have personally made changes or taken steps to help the environment. Up to 87per cent are willing to recycle or re-use



more, and 85 per cent are prepared to reduce food waste. However, only 23 per cent are willing to pay environmental charges or taxes.

There are very real economic and societal benefits to be gained from a shift toward a circular economy and the reduction of waste. This must continue to be a national priority and must be informed by evidence and data that can identify and address problems and create viable solutions.

## CITIZEN ENGAGEMENT

We all have a responsibility to help protect our environment by producing evidence, reporting problems and building sustainable solutions. The problems Ireland face can only be addressed if citizens are engaged and supportive. The EPA has placed a high value and a sense of urgency on this engagement to foster a greater understanding, a genuine sense of ownership and an optimism for the future.

The EPA has continued to play an important role in raising levels of awareness and supporting initiatives that increase citizen engagement with environmental issues. The EPA's Story of Your Stuff competition 2019 asked students to submit stories about the life cycle of an everyday object with an underlying theme of sustainability and awareness – the winning entry told the story of toothbrushes.

During 2019, the EPA worked in partnership with several organisations on a variety of citizen science projects supporting the priorities of clean water and air and sustainable behaviour. The GLOBE citizen science programme continued in partnership with An Taisce. The CleanAir@School programme – a collaboration between the Network of European Environment Agencies and the European Environment Agency – investigated the measurement and effects of nitrogen dioxide near schools. In addition, other programmes included: The Dragonfly Ireland 2019-2024 survey; Explore Your Shore; Seashore Spotter; The Big Beach Biodiversity Survey and Lake Monitoring with Anglers in the Border Region.

The National Dialogue on Climate Action led wide-ranging advocacy and outreach work in 2019 as a means of putting in place a system of community engagement to build public support for climate action. Events organised in collaboration with the Local Authority Climate Action Regional Offices brought together a wide range of stakeholders including local businesses, community and environmental groups and universities.

The reaction to projects throughout 2019 shows that there is a strong desire on the part of citizens to engage with their environment and to assist those tasked with protecting it. This must be built upon, to deliver commitments and embrace necessary changes.

## OECD REVIEW

In 2018 the EPA commissioned the Organisation for Economic Cooperation and Development (OECD) to undertake a review of the EPA with the consultations carried out in 2019. The review followed a framework developed by the OECD to assess and strengthen the organisational performance and governance of regulators. The OECD team were supported in their work by peer reviewers from Norway, Scotland and Portugal. In addition to extensive internal consultation, the team met with a wide range of stakeholders including non-governmental organisations, Government departments and members of the Oireachtas. The OECD will publish the review in 2020.

## IN CONCLUSION

In my role as Director General, I wish to acknowledge the hard work and commitment of the staff of the EPA throughout 2019 and to thank my fellow Directors for their dedication and support in delivering on our strategic goals.

I would like to extend my best wishes to the following EPA colleagues who retired during 2019, after many years of dedicated service: Geraldine Ruane, Leo Sweeney and Gerard Crawley.

Finally, I would like to thank the Department of Communications, Climate Action and Environment and the Department of Housing Planning and Local Government for their continuing support.



**Laura Burke**

EPA Director General





# 2

**“Implement effective regulation and environmental compliance systems to deliver good outcomes for people and the environment and target those who don’t comply.”**



## The EPA licenses activities to ensure that their emissions do not endanger human health or harm the environment.

## 2. REGULATION

### 2.1 LICENSING

The EPA's environmental licensing programme has a wide remit and is responsible for a range of tasks relating to the authorisation of activities that could have an impact on the environment or on human health (Tables 1 and 2). This work includes implementing Ireland's obligations under various EU Directives by carrying out environmental assessments prior to granting or refusing authorisations. It incorporates Environmental Impact Assessment and Appropriate Assessment.

#### Authorisation of Activities

The Industrial Emissions Directive (IED) brought new and substantial changes to how industrial activities are regulated in Ireland. These changes will further ensure that licences include all measures necessary to achieve a high level of protection for the environment.

The IED requires the EPA to reconsider and, if necessary, update the conditions of our industrial licences within four years of new Best Available Techniques (BAT) conclusions being published.

By the end of 2019, 16 Commission Implementing Decisions on BAT conclusions had been published, the most recent being the food and drink and waste incineration sectors which requires that licences in those sectors will need to be reconsidered and re-assessed by December 2023.

Environmental licensing and permitting decisions in 2019 included high profile facility expansions and greenfield investment activities in the waste, pharma and power sectors. There were 38 Proposed Decisions (PDs) for Industrial Emissions (IE), Integrated Pollution Control (IPC) and Waste Licences (WL) issued in 2019 and the number of final decisions issued was 48. There were 64 new applications for IE/IPC or Waste licences received in 2019. Almost half of these were Intensive Agriculture applications.

The Medium Combustion Plant (MCP) regulations were signed into law in December 2017 and are being implemented based on an EPA-led risk-based approach. Their purpose is to limit emissions to atmosphere from boilers and other stationary combustion plants in the 1-50 MWth (thermal input) range. There are currently 78 MCP Registered – the majority of which are emergency generators at datacentres.

The EPA continues to regulate for a circular economy through End-of-Waste and By-Product notifications and facilitated almost 20 million tonnes of soil and stone recovery capacity nationally in 2019 through the licensing of soil and stone recovery facilities. Soil and Stone By-product guidance were also published in June following public consultation. In addition, progress was made in 2019 in the areas of Historic Landfills and the issuing of Certificates of Authorisation.

Assessment of Genetically Modified Organism applications for consent continued in 2019 with 33 decisions issued. In addition, the EPA issued three Dumping at Sea Permits and two Waste Water Discharge Authorisations.

In line with strategic commitments the EPA continued to extend its web service to include electronic submission of licence applications and electronic processing and communication with all stakeholders. This facilitates a more efficient service for our customers and will enable more efficient and accurate reporting of data to the European Commission.

#### Emissions trading

The EPA is the enforcement and implementation authority for the European Union Emissions Trading System (EU ETS) in Ireland and as part of this system implements the EU rules for harmonised free allocation of carbon emission allowances.

For the reporting year 2018, there were 104 stationary installations (industries, power stations and other high-energy users) with reportable CO<sub>2</sub> emissions. All installations



complied with reporting and surrender deadlines in 2019. The information from the installations covered by the ETS for 2018 showed that greenhouse gas emissions from Irish companies decreased by 8.2 per cent (1.4 million tonnes). This was largely due to the 13 per cent decrease in emissions from the power generation sector, due to the coal-fired plant at ESB Moneypoint being offline for three months coupled with the strong presence of renewable energy on the grid. Industrial sectors, on the other hand, showed an increase in emissions.

Emissions from aviation showed a 6.8 per cent increase in 2018 compared to 2017. These emissions come from flights in and out of Ireland and flights anywhere within the European Economic Area, where the aircraft carrier has an operating licence from the Irish Aviation Authority. Thirteen aircraft operators were above the threshold for reporting to Ireland in 2018, according to Eurocontrol data, and all 13 reported on time and surrendered the necessary EU allowances during 2019.

No ETS excess emissions penalties were necessary in 2019. However, a penalty of €210,100, issued in 2018, was collected in 2019 from St James' Hospital Board.

The Union Registry is used as the compliance tool for regulated installations and operators under the EU ETS. These operators, both stationary and aviation, are legally obliged to open an account on the Union Registry to fulfil their compliance obligations in relation to carbon emissions.

The auctioning of ETS allowances takes place on a common platform shared among 25 Member States of the EU. The EPA tracks auctioning of Ireland's quota of allowances each week and checks that the correct revenue is received by the Central Bank. Revenues due to Ireland in 2019 from Auctions of EU ETS stationary (EUAs) and aviation allowances (EUAAAs) totalled €124 million (€124,256,185). In April 2019 the EPA highlighted the need for a carbon price increase beyond €20 per tonne to incentivise investment in low-carbon technologies. The price of carbon continued to rise in 2019 with the highest auction clearing price of €29.46 in July 2019. The average 2019 clearing price was €24.61 for EUAs and €25.20 for EUAAAs.

The Union Registry also contains the registry under the so-called effort sharing decision (ESD). The ESD regulates binding emission targets for all Member States for emissions not included in the EU ETS in 2013-2020, such as transport, building heating, agriculture and waste management. The EPA, as National Administrator, balanced Ireland's emissions for 2016 against our target for that year on 13 March 2019 as instructed by the Department of Communications, Climate Action and Environment (DCCAE). We used our allocation for that year and part of the surplus allocation from previous years, with lower emissions, which had been carried forward. This is one of the flexibilities available to EU Member States under the ESD. Further information is available on the EU Commission website.

**Table 1.** Environmental licensing programme (licensing tasks 2019)

Licence type	Total applications received 2019	Total objections received 2019	Total Proposed Decisions issued 2019	Total Final Decisions issued 2019	Total Decisions issued 2019
IED/IPC Licences (includes IE Waste)	56	31	37	43	80
Waste Licences	8	2	1	5	6
Waste Water Licences	1	N/A	N/A	1	1
Waste Water Certificates of Authorisation	0	N/A	N/A	1	1
GMO Permits (Contained use)	38	N/A	N/A	33	33
GMO Permits (Deliberate release)	0	N/A	N/A	0	0
Historic Landfill Certificates	7	8	8	7	15
Dumping at Sea Permits	4	N/A	N/A	3	3
Certificates of Registration (Waste)	3	N/A	N/A	5	5
Volatile Organic Compound (VOC) Permits	12	N/A	5	5	10
Greenhouse gas permits	26	N/A	N/A	29	29
<b>Total</b>	<b>156</b>	<b>41</b>	<b>51</b>	<b>132</b>	<b>183</b>

N/A, not applicable.

**Table 2.** Environmental licensing programme (other regulatory tasks 2019)

Tasks	Total tasks assessed 2019
Article 11 requests	61
IE/IPC Amendments	59
IE/IPC Amendments (EPA initiated)	7
Waste Amendments	6
Waste Water treatment Plant (WWTP) Amendments	4
Dumping at Sea Amendments	2
GMO Amendments	2
Article 27 notifications (by-product)	62
Article 28 Applications (end of waste)	5
European Medicine Agency (GMO)	5
Directive 2001/18/EC (GMO)	0
Transfers	17
Air Pollution Appeals	0
Planning correspondences examined	274
Medium Combustion Plants registered	78
<b>Total</b>	<b>582</b>

## Radiation protection authorisations

New regulations (S.I. No. 30 of 2019) covering the protection of workers and members of the public from ionising radiation were signed into law on 5 February 2019. These regulations are based on the most recent revision of the EURATOM Basic Safety Standards Directive and are referred to as the Ionising Radiation Regulations 2019 (IRR19).

Previously, to legally carry out any practice involving the use of radioactive sources or radiological equipment (such as X-ray machines) in Ireland, it was necessary to be authorised by obtaining a licence in advance from the EPA.

IRR19 introduced graded authorisation, which allows for two forms of authorisation: registration and licensing. Registration is a simpler and less administratively onerous form of authorisation, appropriate for practices that are less complex in nature and have been demonstrated to be relatively safe. Licensing continues to apply to higher risk practices.

New fee regulations (S.I. No 34 of 2019) to accompany the graded authorisation system were also introduced. The fee structure is designed so that the charges are proportionate to

the level of risk associated with the types of practices being carried out and therefore the level of regulatory oversight required.

IT systems were upgraded to facilitate the implementation of graded authorisation, incorporating registration and licensing processes and authorisation fees. Users can now apply for a Licence or Certificate of Registration through EPA's Environmental Data Exchange Network (EDEN) and pay their authorisation fee online.

During 2019, existing licensees were transitioned into the graded authorisation system on a phased basis. At the end of 2019 there were 1,313 authorisations (229 licences and 1084 registrations) held across a range of sectors including dental, medical, industrial, educational and veterinary sectors. In addition, 1168 amendments to existing licences were processed. During the year, 30 licences were closed. Before closure of a licence, the licensee must ensure that all licensed products are either properly disposed of or returned to the manufacturer or supplier.

## The EPA implements and enforces environmental and radiological protection legislation in Ireland.

### 2.2 ENFORCEMENT

As environmental regulator for public water services, the EPA focused on Irish Water's delivery of priority infrastructure improvements in drinking water and urban waste water during 2019.

#### Drinking water

At the end of 2019, 14,362 people remained on a boil water notice, compared to 897 people at the end of 2018. The main reason for the increase is that consumers on the Lough Talt public water supply (12,576 people) were placed back on a boil water notice in January 2019, having had a previous notice lifted at the end of 2018. Several short-term incidents occurred during the year resulting in 695,313 people placed on a boil water notice at some stage during the year. The most significant cases were two incidents at Leixlip Water Treatment Plant which resulted in over 600,000 people on boil water notices for three days in October and eight days in November.

The number of supplies on the Remedial Action List (RAL) fell from 63 at the end of 2018 to 52 at the end of 2019, however the number of people served by supplies on the RAL increased from 555,689 to 1,128,847. This was due to the addition of the Leixlip Water Treatment Plant to the RAL at the end of 2019, following two boil water notices for consumers on the Leixlip public water supply. EPA is continuing to monitor the progress of Irish Water in addressing the issues identified by the Agency during audits associated with the boil water notices which are due for completion in 2020.

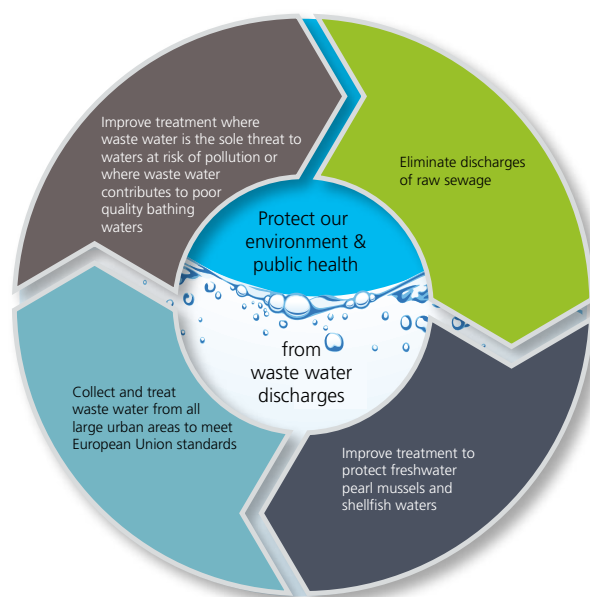
In total, 62 drinking water site inspections were completed to verify completion of works to support removal of sites from the Remedial Action List, to assess response to incidents and supplies with Boil Water Notices/Water Restrictions imposed on them, and to ensure protection of public health.

The EPA published a drinking water report on public water supplies focussing on the challenges facing these supplies. The report followed Plain English guidelines focussing on accessibility for all readers.

#### Municipal waste water discharges

During 2019, the number of wastewater priority areas reduced from 132 to 120. The EPA reported on this reduction in its 2018 report on urban waste water treatment published in 2019. The report set out the need for an increase in the pace of upgrades to priority deficient waste water treatment systems to prevent pollution and protect human health (Figure 1).

**Figure 1.** Environmental Priorities



The EPA completed 299 waste water site inspections in 2019 to deliver improvements to the environment and these focused primarily on operational improvements, monitoring progress on infrastructural works where relevant, monitoring compliance with discharge limits and responding to complaints/incidents. One conviction was secured during the year against Irish Water for poor operational performance. Positive environmental outcomes were delivered with the resolution of long-term repeated licence breaches in 90 agglomerations. However, the overall number of long-term licence breaches only reduced slightly to 224, emphasising that new issues continue to emerge at urban waste water treatment plants.

### Domestic waste water treatment systems (septic tanks)

The EPA published the National Inspection Plan Report for the reporting period 2017 and 2018, highlighting an ongoing septic tank failure rate of approximately 50 per cent, as well as the risks from failing tanks to human health and the environment and the planned expanded grant scheme. Positively, the remediation of failed septic tank systems improved from 73 per cent to 84 per cent.

The EPA completed the public consultation on, and made relevant amendments to, the Code of Practice for Single House Treatment Systems. The revised Code of Practice will be published in 2020.

### Industrial and Waste Licence enforcement

The EPA licensed and regulated 833 industrial and waste facilities during 2019. The EPA's objective is to ensure that operators carry on their activities in accordance with their licences. These objectives are advanced through a combination of promoting compliance, guidance and assistance, monitoring compliance, inspections and sampling, and taking enforcement actions where necessary. The EPA's enforcement approach is underpinned by the principles published in the Compliance and Enforcement Policy. Table 3 includes the numbers of inspections carried out on industrial and waste licensed activities.

The EPA prioritises enforcement effort on sites which present the highest risk to the environment based on the type of activity that is licensed, the location of the activity (i.e. proximity to people or protected areas) and the enforcement history of the site (i.e. whether the site has a history of non-compliance). The majority of EPA inspections (93%) were unannounced in 2019 with around half being planned inspections and half being carried out in response to incidents or complaints.

The National Priority Sites List is used to target EPA's enforcement effort at the poorest performing sites in order to drive improvements in environmental compliance. This

list ranks industrial and waste sites in order of priority for enforcement, based on factors such as complaints (Table 4), incidents, compliance investigations and non-compliances with the licence. This list was published quarterly with 11 licensed sites included on the list at least once during 2019. The EPA's enforcement activities are summarised in the infographic in Figure 2.

**Figure 2.** Infographic summarising EPA enforcement activities





**Table 3.** Number of inspections by sector undertaken in 2019

Activity	Number of inspections
Industrial and Waste Licences	1,472
Urban Waste Water Discharge Licences	299
Drinking water treatment plants	62
Dumping at Sea Permits	7
Volatile Organic Compound Permits	7
Market surveillance – chemicals	25
ODS and F-gas	4

**Table 4.** Number of complaints received in 2019 and number of facilities the subject of those complaints by sector

Activity	Number of complaints	Number of facilities the subject of those complaints
Industrial and Waste Licences	608	120
Waste water	77	43
Drinking water	21	15
ODS and F-Gas	3	N/A
<b>Total complaints</b>	<b>709</b>	

## Preventing environmental damage

### Financial provision for environmental liabilities

Ensuring that licensees make adequate financial provision to cover the environmental liabilities associated with potential incidents or with the closure and aftercare of sites remains an ongoing EPA priority. During 2019, the EPA published details on its risk-based approach and clarification on the classes of activity to whom the requirements apply.

In 2019, the EPA secured an additional €12 million in financial provision at licensed sites, bringing the total across priority sites to more than €708 million. Financial provision instruments, totalling €328 million, were also renewed or replaced, ensuring industry provides financially for known and potential liabilities. This represents a significant reduction in the risk to the environment and to the State.

## Market surveillance, producer responsibility and chemicals in the environment

### Chemicals (including solid fuel regulations)

The concentration of specified hazardous substances in chemical mixtures and items are, among other things, regulated under the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation and the Persistent Organic Pollutants (POPs) Regulation. One such restriction applies to a group of chemicals known as Short Chain Chlorinated Paraffins (SCCPs). In 2018, the EPA had 20 samples of general plastic household items tested for a range

of chemicals prohibited under both Regulations. One sample, a bath mat, was found to contain elevated levels of SCCPs. Further investigations into the non-compliance were carried out during 2019. The economic operator concerned voluntarily withdrew the products from the market and managed the withdrawn products appropriately.

In late 2019, the EPA, as part of its participation in the Restriction of Hazardous Substances (RoHS) Enforcement Network joint surveillance project, had 25 samples of products containing light emitting diodes (LED) procured and tested for substances restricted under the RoHS Directive. The test reports are expected early in 2020. In addition, the EPA had 50 technical files relating to LED-containing products reviewed for compliance. The reviews are currently ongoing with evaluation results expected in 2020.

The EPA is charged with the establishment and maintenance of the Fuel Register under the Solid Fuel Regulations (S.I. No. 326 of 2012) as amended. There were 22 coal bagging facilities and 24 solid fuel suppliers on the Fuel Register at the end of 2019.

### Producer responsibility

The EPA has enforcement responsibilities under the Waste Electrical and Electronic Equipment (WEEE), Batteries, and Tyres Regulations. Enforcement efforts are focussed on non-compliant producers. Producers either manufacture or import products and place them on the market in Ireland for the first time.

For Business to Customer (B2C) products (WEEE and batteries), 42 retail inspections and 45 inspections at trade expositions nationwide were carried out. These revealed 35 unregistered producers. In addition, 60 distance seller (website) inspections were carried out, which revealed an additional 23 unregistered producers. All unregistered producers were issued with non-compliances and directed to comply. By the end of the year all but one of the unregistered producers detected by the EPA had registered. Formal complaints were issued to five EU member states regarding 44 distance sellers who were selling products in Ireland online but had not appointed an authorised representative as required in Ireland.

The EPA carried out a six-month enforcement campaign targeting 271 companies in the home security and fire safety sectors (B2C products). This resulted in 73 non-compliant producers being identified and given directions to comply. Furthermore, the EPA undertook 24 inspections as part of this campaign and 59 audits at Business-to-Business (B2B) producers. The most common non-compliance was a failure by producers to clearly offer to take-back B2B WEEE from users of their products. In addition, 95 per cent of WEEE reports and 90 per cent of WEEE plans had been submitted by B2B producers by the end of 2019. Guidance was issued to all 650 B2B producers.

The EPA issued 12 fixed payment notices, each with a penalty of €2,000, to non-compliant producers. Of these, nine producers are now compliant with the remaining three moving towards compliance.

Audits were carried out at two of the four self-complying battery producers. All waste battery plans, and reports were reviewed and approved.

Seven WEEE-related complaints were investigated and closed out. All were related to the retail sector (B2C) and the failure to take back WEEE, either in a retail outlet or on delivery of new product at the home.

The EPA targeted 60 non-compliant tyre producers during 2019 with 31 inspections being carried out and 84 enforcement letters being issued. Following this action, 15 producers became compliant, 21 had applied for registration while 17 made no application to register in 2019. EPA is continuing to follow up with the producers who did not apply for registration.

Summary statistics on the 2019 enforcement campaigns are shown in Table 5 below.

**Table 5.** Summary statistics on the 2019 producer responsibility enforcement campaigns

Task	Total number of tasks
Business to Business Producer WEEE Waste Management Plans reviewed	215
Business to Business Producer WEEE Waste Management Reports reviewed	545
Business to Business Electrical and Electronic Equipment (EEE) Producer Audits	59
Business to Consumer EEE/Battery Retailer Inspections	42
Trade show and Exposition inspections	45
Business to Consumer EEE/Battery Distance-seller website inspections	60
Free-rider producer inspections (home and fire security sectors)	24
Audits at self-complying battery producers	2
Tyre Producer Inspections	31

## Ozone-depleting substances and fluorinated greenhouse gases

As part of the work to significantly reduce the use of ozone-depleting substances (ODS) and fluorinated gases (F-Gas) with high global warming potential, the EPA produces guidance and carries out both desktop and on-site inspections of equipment end-users, engineering contractors servicing the relevant equipment and gas distributors. The EPA also prepares the National Halon Critical Use Report and the ODS Illegal Trade Report for submission to the European Commission. During

2019, the EPA received an award from the United Nations Environment Programme for assistance in the international enforcement of the Montreal Protocol.

## New Certification Process for F-gas contractors

Regulation of the F-gas sector requires persons and companies undertaking certain activities to be certified. Such certificates/ attestations must be issued by a recognised awarding authority within the EU. From January 2021, following the transition period after the UK's withdrawal from the EU (Brexit), certificates issued by organisations within the UK will no longer be recognised within the EU. Heretofore, contractors within Ireland relied heavily on certification by UK organisations.

The DCCAE and the European Commission authorised the EPA to issue certificates to contractors holding valid UK certificates to avoid unnecessary re-training of contractors. The DCCAE and the EPA, held a series of workshops for the contractors covering the implications of Brexit to their operations and the application process. The online application system was launched in 2019 and was supported by an awareness campaign and updates to the EPA website on the recertification scheme. In addition, advertisements were placed in trade magazines to raise awareness of the ongoing HFC phase-down which will have significant implications for refrigeration applications in Ireland.

Other activities in 2019 included:

- ▲ Inspections of 42 halon critical users, refrigerant contractors, refrigerant equipment operators, end-of-life vehicle treatment facilities and companies registered in the EU but representing a non-EU company for the purposes of compliance with the F-gas regulations quota allocation system.
- ▲ Desktop surveys of 195 users to compile the 2018 National Halon Critical Use Report.
- ▲ Issuing 130 Prior Annual Notifications to contractors who move waste gases.
- ▲ Collaborating with Revenue (customs) on the import/export of ODS and F-Gas equipment and gases and investigating online websites for illegal sales of ODS or F-Gas.

## Radiation protection inspections

The EPA carries out an annual programme of radiation protection inspections to assess compliance with legislation and licence conditions. These inspections allow the EPA to assess the standard of radiation protection at the sites inspected, to identify common or emerging issues across sites and to promote a strong radiation protection culture.

The inspection programme is set out annually based on several objective criteria including the radiological risk associated with the authorised practices, the time elapsed since the last inspection, and the compliance history of the facility. Reported incidents within the sector of operation are also considered along with any relevant information that has become available concerning either the authorised practices or the sectors in general.

During 2019, 82 radiation protection inspections were undertaken (Table 6), including four security surveys carried out with the assistance of An Garda Síochána National Crime Prevention Unit. 79 per cent of the inspections undertaken were unannounced. The focus of the inspection programme was the industrial and medical sectors. In addition to on-site inspections, all radiotherapy facilities were requested to complete an online self-assessment to assess their own compliance with the regulations. This approach gave the EPA a view of the current level of compliance in the radiotherapy sector and to identify emerging issues. Radiotherapy facilities were also requested to identify any planned new developments, to estimate the likely demand for authorisation applications over the next two to three years.

Although levels of compliance were generally found to be good, ongoing results show that there continues to be room for improvement in the areas of risk assessment, radiation safety procedures, practical radiation protection arrangements, maintenance and operational controls and administrative matters.

During 2019, 12 reportable incidents and 9 reportable doses were notified to the EPA. Each of these matters were followed up as appropriate. One of the incidents involved the loss of a radioactive source from a hospital. The EPA successfully prosecuted the hospital for failure to comply with its licence conditions relating to the security of radioactive material.

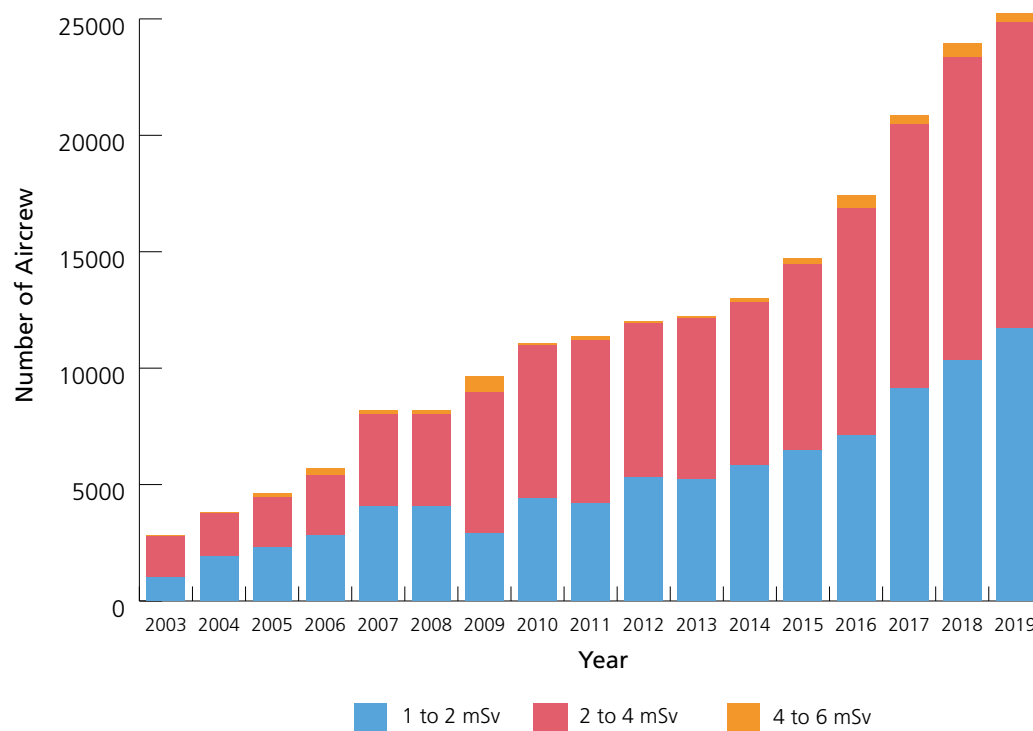
**Table 6.** Radiation protection licensee categories and inspections undertaken during 2019

Licensee sector	Number of completed inspections
Hospital and medical facilities	35
Industrial and commercial (including source distributors and transport companies)	29
Education and research	4
Other licensees (low- and medium-risk vets, dentists, cabinet X-ray and X-ray distributors)	14
<b>Total</b>	<b>82</b>

### Control of aircrew exposure

In accordance with IRR19 the holder of an air operator's certificate is required to evaluate doses received by aircrew to determine if measures to control exposure to cosmic radiation are warranted and to report the results to the EPA. For 2019, the information received from seven licensed air operators showed that 25,261 aircrew received an annual effective dose from cosmic radiation exposure exceeding 1 millisievert (mSv). Of these, 408 received doses exceeding 4 mSv. There were no reported doses exceeding the 6 mSv threshold, above which air operators must organise the working schedules of aircrew with a view to reducing their exposures. Since monitoring of aircrew began in 2003 there has been a consistent yearly increase, as shown in Figure 3, in the number of aircrew receiving doses in excess of 1 mSv. This can be attributed to an increase in the number of aircrew required for the operation of new and existing routes as the demand for air travel increases.



**Figure 3.** Number of air crew receiving radiation doses greater than 1mSv.

## Prosecutions

In 2019 the EPA published its new enforcement policy setting out how the EPA enforces environmental and radiological protection legislation to promote compliance. One of the key aspects is how and when the EPA take prosecutions. The policy clearly sets out the criteria considered in determining the enforcement action to be taken and specifically the circumstances when the EPA normally consider a prosecution.

During 2019, twelve cases were heard and concluded in the District Court (Table 7). These cases resulted in the conviction of eight licensees. In three cases the defendant was given the benefit of the Probation Act and in one case the charges were struck out with a donation awarded to a river rehabilitation group.

**Table 7.** Legal enforcement activities undertaken in 2019

Legal enforcement activity	Output
District Court prosecutions heard	12
Fines awarded in District Court	€20,000
Costs awarded in District Court	€164,774
Total fines and costs	€184,774
Charitable donations	€15,500



## The EPA produces advice and guidance to industry and the public covering a wide range of environmental activities to ensure compliance with best practice.

### 2.3 GUIDANCE

#### Industrial and waste licensed sites

The EPA supports licensees by providing guidance to assist them comply with their statutory requirements. During the year, the EPA published a new guidance note on a methodology for industrial and waste odour abatement solutions (also known as Air Guidance-9). The EPA also revised and updated guidance on assessing odour impacts (AG5) and in-house air monitoring for licensees (AG8). Furthermore, the EPA published a guidance note to industry on firewater retention facilities as well as guidance to clarify the requirements for underground pipeline testing.

To assist facilities meet their reporting requirements under the Pollution Release and Transfer Register and Large Combustion Plant Directives, the EPA published a guidance note on Environmental Performance Reporting (EPR) that provides clarity on reporting through the new dedicated EPR webpage: [www.epa.ie/enforcement/epr/](http://www.epa.ie/enforcement/epr/).

#### Financial provision

It is an EPA priority to ensure that licensees make adequate financial provision to cover the environmental liabilities associated with potential incidents or with the closure and aftercare of sites. During 2019, the EPA published guidance on environmental liabilities and financial provision setting out: the EPA's risk-based approach, the types of licensed facilities which require the agreement of costings and provisions for their environmental liabilities and the specific actions required of all operators for their facilities. Additional guidance was published on environmental impairment liability insurance.

#### Waste

The EPA has various responsibilities regarding the implementation of the WEEE, Batteries and Tyres Regulations in Ireland – principally, a lead role in enforcement in this area. However, the EPA also undertakes a range of activities to ensure compliance with, and to raise awareness of, the Producer Responsibility Initiatives and of the various obligations that apply to different sectors.

During 2019, guidance was published for exhibitors at tradeshows and expositions to help them comply with their producer responsibilities under the WEEE and Batteries regulations.

In June 2019, the EPA published Guidance on Soil and Stone By-Products in the context of Article 27 of the European Communities (Waste Directive) Regulations 2011 with the purpose of encouraging the prevention of waste including the lawful and beneficial use of excess uncontaminated soil and stone.

End-of-waste is a means of determining the point at which, for the purposes of waste regulation, a material need no longer be classified as waste after it has undergone a recovery, including recycling operation, and complies with specific criteria. The EPA published decisions, under Article 28 of the European Communities (Waste Directive) Regulations 2011, establishing end-of-waste criteria relating to:

- ▲ Recycled aggregates from crushed demolition concrete.
- ▲ Recycled aggregates from construction and demolition wastes.
- ▲ Pulverised fuel ash and furnace bottom ash.
- ▲ Poly(ethylene phthalate) (PET) recyclate.

#### Water

##### Water Management

The EPA published guidance on Local Catchment Assessments in Urban Areas. The guidance will be used by local authorities and others to help identify and assess the sources of water pollution in urban areas.

##### Drinking water

The EPA developed and published a joint position paper with the Health Service Executive (HSE) to provide a summary of the issues in relation to pesticides in drinking water including health, legislation and interventions.

## Wastewater

The annual reporting of environmental information is a legal requirement of all EPA Waste Water Discharge Licences. The EPA published guidance during the year to assist Irish Water with the preparation and submission of an annual environmental report.

## Ozone-depleting substances and fluorinated greenhouse gases

A range of guidance documents have been published by the EPA in relation to ozone-depleting substances (ODS) and fluorinated greenhouse gases (F-gas) management. Two additional guidance documents were published during 2019 (*What to expect from an EPA halon critical use survey verification visit* and *What to expect from an EPA Only Representative site visit*) and one existing guidance was updated (*Information Leaflet for Collection and Transport of Waste Refrigerants*).

## Environmental assessment

The EPA continued in 2019 to update its guidance for plan-making authorities in carrying out Strategic Environmental Assessment (SEA) of relevant plans/programmes/strategies. Good Practice Notes on SEA for forestry and waste sectors were published. In addition, the EPA published good-practice guidance on incorporating climatic factors into plans and programmes directly or indirectly affected by climate change.

## Radiation

During 2019, new regulations, the Ionising Radiation Regulations 2019 (IRR19), came into effect transposing the EURATOM Basic Safety Standards Directive. The EPA implemented new arrangements for authorisation of radiological practices, known as graded authorisation and developed new guidance for employers on radon in workplaces. In April, the EPA updated ionising radiation guidance on the website to reflect both the new regulations and graded authorisation.

In May, the EPA published an updated code of practice covering the use of ionising radiation in Dentistry. The Code of Practice is intended to provide comprehensive information for dentists to comply with the new regulations.

## Non-ionising radiation

In May 2019, the EPA was assigned statutory responsibilities for the public exposure to non-ionising radiation in the frequency range 0–300 GHz. This frequency range is commonly referred to as Electromagnetic Fields (EMF).

During 2019, the EPA published dedicated webpages setting out the EPA's role and providing advice and guidance for the public on EMF: [www.epa.ie/radiation/emf/](http://www.epa.ie/radiation/emf/).








# 3

“ Provide high quality, targeted and timely environmental data, assessments and evidence to inform decision making by citizens, businesses and government. ”





**The EPA provides evidence based assessment and timely information to all stakeholders, to support action to protect and manage the environment.**

## 3. KNOWLEDGE

### 3.1 MONITORING AND ASSESSMENT

#### Air quality

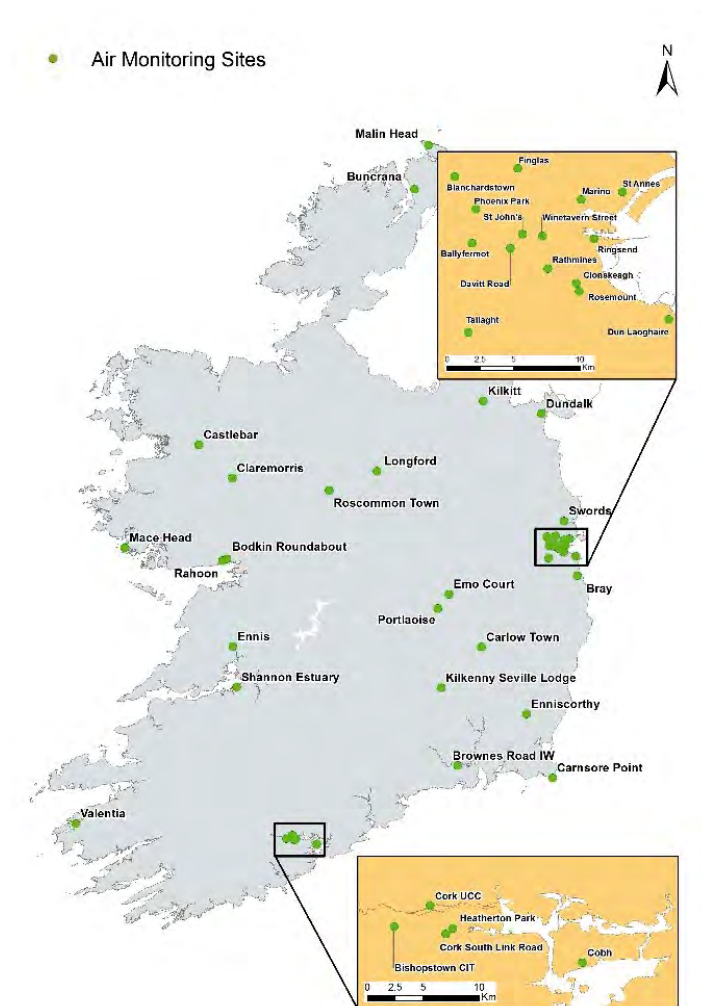
The EPA, in collaboration with local authorities and other bodies, operates the National Ambient Air Quality Monitoring Network (Figure 4). Data from the network is made available to the public through the EPA website and reported in compliance with the requirements of the EU Clean Air for Europe Directive (CAFÉ) and 4th Daughter Directive. Data is assessed against European legal limit values and World Health Organization (WHO) guideline values.

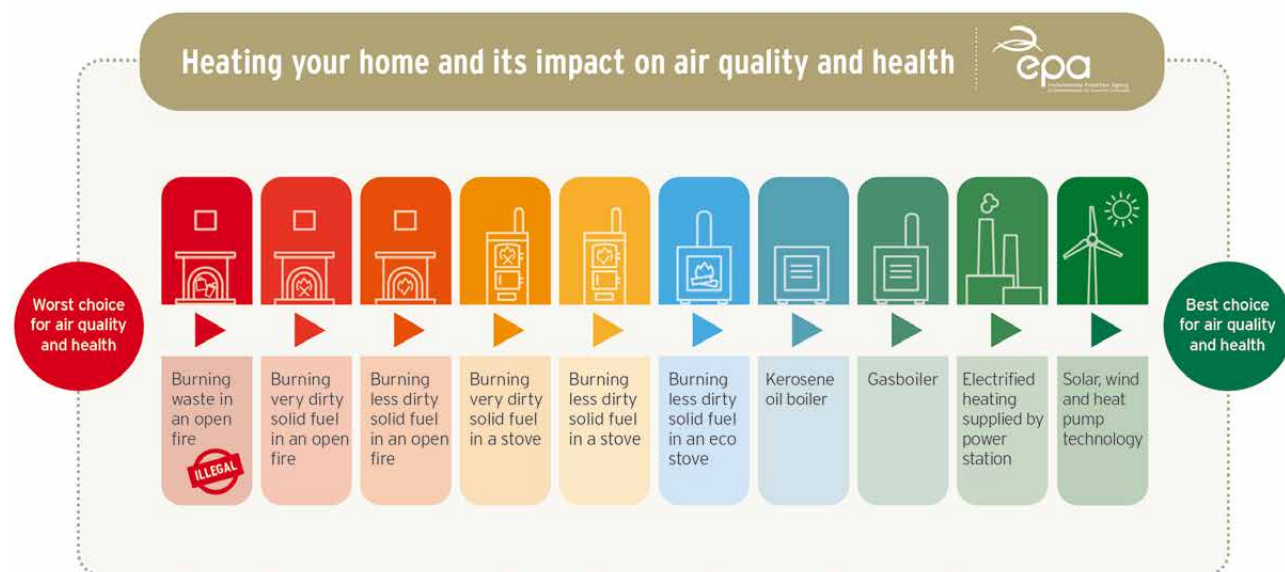
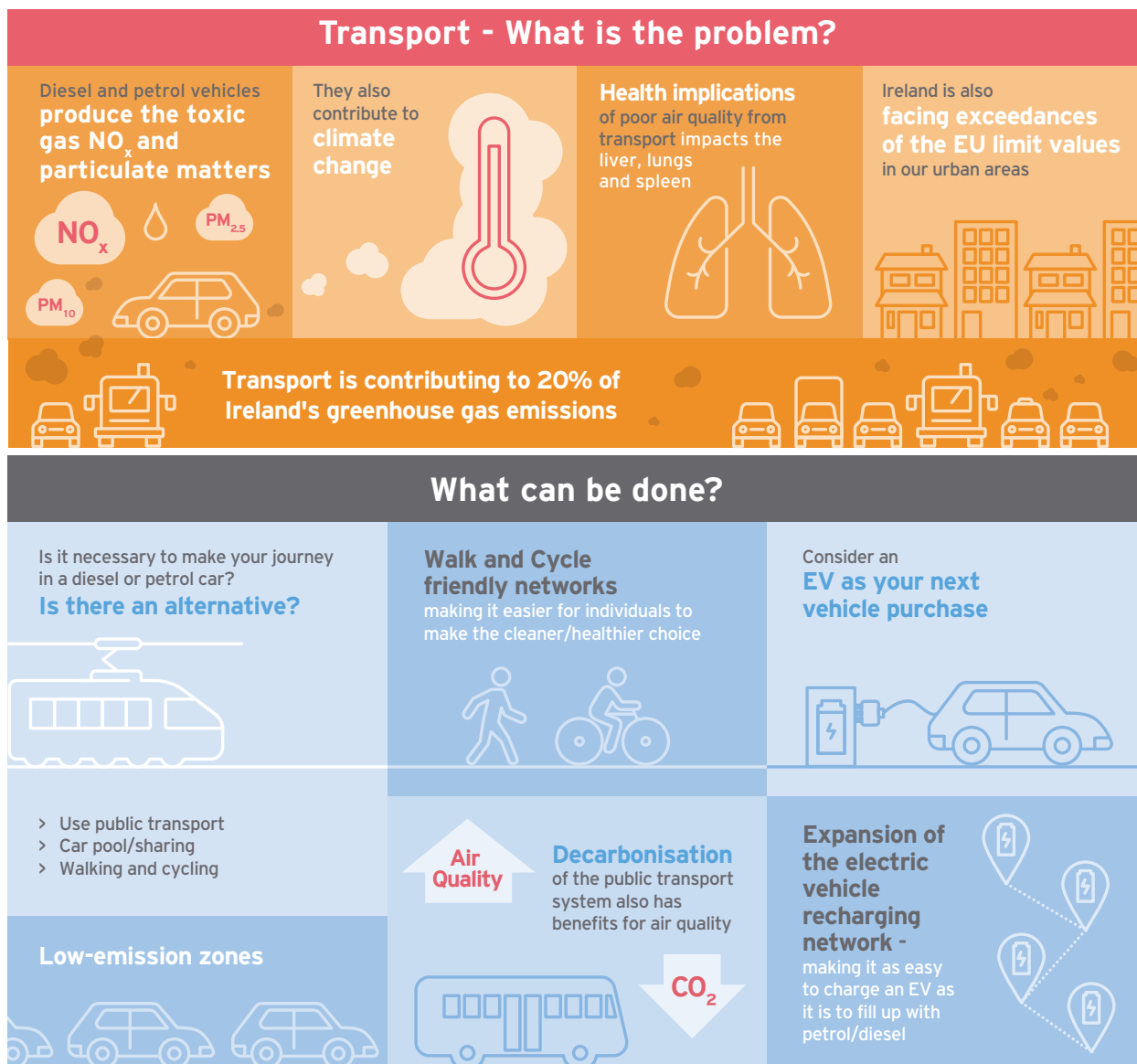
During 2019, the network was expanded with the addition of 19 new monitoring stations and three existing stations were upgraded to provide real-time particulate matter (PM) monitoring.

Coinciding with World Lung Day in September 2019, the EPA published its annual report on air quality in Ireland for 2018. The report concluded that although air pollutants did not exceed legal limit values, local issues with air quality can impact negatively on people's health – WHO guideline values for health were exceeded for several pollutants. In July, the EPA reported on nitrogen dioxide levels in Dublin finding that many areas of the city had high levels of the air pollutant. Levels were highest at locations with heavier traffic with some locations at risk of exceeding the statutory EU limit.

Air quality impacts people's health and there are an estimated 1,180 premature deaths in Ireland due to air pollution. Levels of particulate matter (fine particles) in air is of growing concern. Levels of this pollutant are particularly high during the winter months when people's use of solid fuels such as coal, peat and wood negatively impacts air quality, especially in small towns and villages. Any movement along the spectrum of home heating choices and solid fuel choices towards cleaner modes (Figure 5) will have a subsequent improvement on air quality. Similarly, the health impact from transport emissions can be mitigated by making the right transport choices (Figure 6).

**Figure 4.** National Ambient Air Quality Monitoring Network



**Figure 5.** Infographic on the air quality and health aspects of home heating choices**Figure 6.** Infographic on the air quality and health aspects of transport choices

## Air pollutant emission inventories and projections

The EPA submitted air pollutant emissions inventory data for 2017 and emissions projections to 2040 to the United Nations Economic Commission for Europe (UNECE), under the Convention on Long-range Transboundary Air Pollution (CLRTAP), and the EU, under the National Emission Ceiling (NEC) Directive.

The air pollutant emissions inventory data for 2017 showed that Ireland continued to be non-compliant for ammonia emissions. These emissions are predominantly generated in the agriculture sector. During 2020, Ireland will need to set out in its final National Air Pollutant Control Programme how ammonia emissions will be mitigated to bring Ireland back into compliance.

Air pollutant emissions projections indicate that Ireland will continue its non-compliance with the ammonia ceiling over the 2018–2030 period without additional mitigation measures. In 2019, the European Commission contracted a review of Member States' air pollutant emissions projections under the National Emissions Ceiling Directive. The review report was published in November and assessed the overall quality of the projections as being good. The EPA will adopt the key recommendations from the review for future reporting.

## Water quality

### Drinking water

During 2019, the EPA published its annual report on the quality of drinking water in public supplies in 2018 based on monitoring data from Irish Water and the regulation of public supplies by the EPA. The report found that although compliance was high, the incidence of *Cryptosporidium* detections had increased and there were many lead-pipe connections in properties. The EPA's annual report on the quality of drinking water in private supplies for 2018 was prepared in 2019 and will be published in early 2020.

### Wastewater

In November 2019, the EPA published its annual report on urban waste water treatment in 2018 finding there was some improvement in waste water treatment, including the elimination of discharges of raw sewage from two areas. However, the report highlighted that the rate of improvement in Ireland's waste water treatment infrastructure was too slow with many areas continuing to release inadequately treated waste water into the environment.

During 2019, the EPA reviewed over 2,000 inspections by local authorities of domestic waste water treatment systems (septic tanks) covering the period 2017 and 2018. The National Inspection Plan report highlighted an ongoing septic tank

failure rate of approximately 50 per cent. These faulty systems pose a threat to health and are a significant threat to water quality in local rivers.

### Water Framework Directive

The objectives of the Water Framework Directive (WFD) are to protect all good and high-status waters, to prevent further deterioration of all waters, and to restore degraded surface and groundwaters to good status.

The Water Quality in Ireland 2013–2018 report was published in December 2019 and highlighted river water quality has deteriorated since the previous assessment in 2015 after a period of relative stability and improvement. Overall, there was a 5.5 per cent net decline (128 water bodies) in the quality of river water bodies. The number of high-status river water bodies dropped by nearly a third (91 water bodies) since the baseline assessment in 2007–2009. However, 92 per cent of groundwater bodies, 80 per cent of coastal waters, 53 per cent of rivers, 50 per cent of lakes and 38 per cent of estuaries were found to be of satisfactory quality.

The River Basin Management Plan 2018–2021 (RBMP), published by the Department of Housing, Planning and Local Government (DHPLG), set out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies. The EPA is responsible for co-ordinating and implementing the national monitoring programme, undertaking technical and scientific assessments to underpin the programme of measures in the RBMP, and for reporting to the EU on WFD and other water related activities.

During 2019, the EPA's monitoring programme of rivers, lakes, transitional waters such as estuaries and coastal waters and groundwaters included:

- ▲ Ecological surveys of 936 river water bodies, 90 lakes and 200 transitional and coastal water bodies.
- ▲ Chemical analysis of 14,408 Water Framework Directive samples from rivers, lakes, estuaries and coastal waters.
- ▲ Sampling and analysis of three rounds of groundwater samples from 272 wells and springs.

The EPA also produced individual lake reports for lakes in Priority Areas for Action and for other priority lakes. The purpose of these reports is to provide more detailed information on status and trends which can be used to inform the selection of measures in areas targeted for action under the RBMP.

The second cycle RBMP for the period 2018–2021 is being implemented, and preparations are underway to develop the third cycle plan for 2022–2027. In 2019, the EPA progressed the national hydromorphology (physical habitat) work programme. The first draft of a national hydromorphological



condition assessment for over 60,000 kms of rivers was completed. Also, a new index for assessing hydromorphology in transitional and coastal waters was developed.

These assessment tools significantly improve knowledge of the impact of physical changes on waterbodies and will be used by the EPA as part of the assessment to identify pressures impacting water bodies. The assessment tools may also be used by a range of public bodies to assess the impact of new developments on, or in, river channels and to develop appropriate river restoration measures.

The EPA is updating models and assessment tools to reflect the changes in agriculture, urban waste water, hydromorphology and other pressures. In addition, earth observation data is being investigated as to whether it can be used to assess the ecology of lakes.

### Hydrometric programme

The EPA continues to monitor the impact of surface water abstractions on river flows and to provide hydrometric data to support national and international reporting obligations, water resource planning and management, flood risk management, infrastructure design and a variety of other activities.

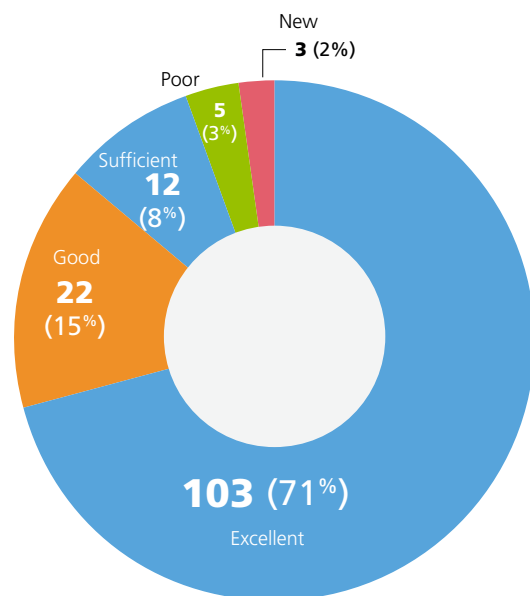
During 2019, the EPA carried out 1,998 assessments of groundwater levels and surface water levels and/or flow at sites throughout the country. These assessments primarily focused on the EPA/local authority network of sites, but also included targeted flow measurements where data was needed for specific purposes. The frequency of site visits was tailored to the site requirements and natural variability in the river channel. The data are available for download via the EPA's HydroNet web pages: [www.epa.ie/hydronet/](http://www.epa.ie/hydronet/). A full review of 95-percentile flows for the national programme was completed in 2019. In addition, flow measurements were resumed at previously suspended hydrometric stations in Cork and Kerry.

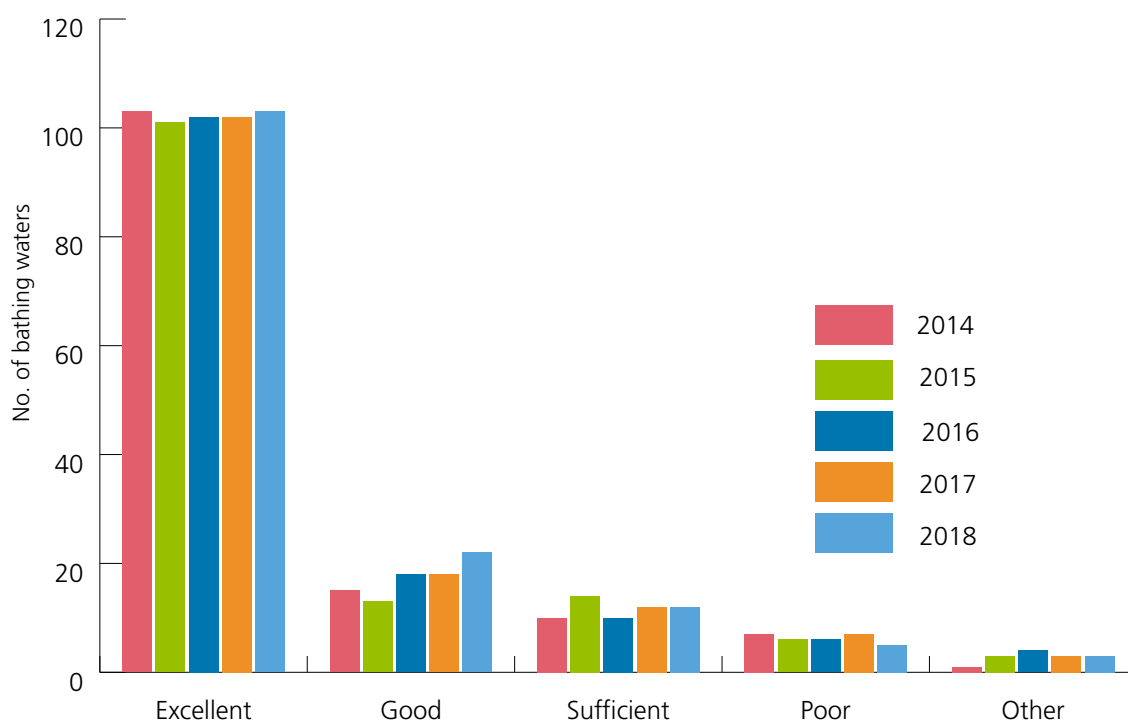
The EPA developed a new model for water resource assessment and abstractions (the Wallingford Hydrosolution's "Qube" model). It has been used to evaluate the pressures from abstractions on water resources nationally. The outputs from this work will be integrated into WFD risk characterisation in 2020. The EPA continues to engage with sectoral representatives and public authorities to encourage further registration of water abstractions.

### Bathing water quality

During 2019, the EPA published the annual bathing water report that assessed results for the 2018 bathing season. Details of the 2018 bathing water quality assessments are shown in Figure 7. The year-on-year changes in bathing water quality since 2014 are shown in Figure 8. An assessment of the 2019 bathing water submission was formally reported to the EU in December 2019 and will be published during 2020.

**Figure 7.** Bathing water quality in 2018



**Figure 8.** Year-on-year changes in bathing water quality since 2014

## Climate change

### Emission inventories

In October 2019, the EPA published provisional Greenhouse gas (GHG) emissions data for 2018. The data highlighted that Ireland was not on track towards meeting its emission reduction targets, despite a small overall emissions reduction – driven by reduced coal use in the Moneypoint power plant. For 2018, Ireland exceeded its annual limit under the EU's Effort Sharing Decision by over 5 million tonnes carbon dioxide equivalent (Mt CO<sub>2</sub>e), following an exceedance of 3 Mt CO<sub>2</sub>e in 2017. Emissions from the Agriculture and Transport sectors continued to rise in the absence of effective mitigation measures.

### Emissions projections

The EPA published greenhouse gas emission projections, out to 2040, in June 2019 highlighting the likelihood of non-compliance with Ireland's 2020 and 2030 targets under the EU Effort Sharing Decision and upcoming Effort Sharing Regulation. The Projections included the projected impact of the measures announced in the National Development Plan but predated the Government's Climate Action Plan. The projected impact of these measures will not be clear until projections are re-evaluated in 2020.

## European Pollutant Release and Transfer Register

If a facility has emissions or waste transfers above relevant thresholds, information is provided by the facility to the EPA concerning the amount of pollutant releases to air, water and waste water as well as off-site transfers of waste.

This information is made available on the EPA website and forwarded to the European Commission for display on the European Pollutant Release and Transfer Register (E-PRTR).

Following data collection and validation for the reporting year 2017, the E-PRTR data was submitted to the European Commission in March 2019. The data was also published on the EPA's website in August 2019. Supplementary data was submitted to the European Commission in August and December 2019.

Analysis of the 2017 data show that there was an increase in the number of facilities reporting under PRTR. Overall, there was an increase in releases to air for carbon dioxide, nitrogen oxides, nitrous oxide, sulphur oxides and ammonia, while releases of methane and hydrochlorofluorocarbons decreased. There were increases in total phosphorus, chlorides, fluorides and total organic carbon releases to water – particularly from large urban waste water treatment plants. There was an increase in hazardous waste sent for recovery, including that sent abroad, and a decrease in the quantity sent abroad for disposal. Non-hazardous wastes transferred for disposal decreased while the quantities for recovery increased.

## Waste

In 2019, six thematic areas were updated in reporting national waste statistics: municipal (household and commercial), construction & demolition, waste electrical and electronic equipment (WEEE), packaging, end-of-life-vehicles (ELVs) and composting & anaerobic digestion. In addition, sections on waste infrastructure, indicators and 'progress to targets' were updated with the latest available data.

Data for the 2017 reference year was compiled and the key findings reported were:

- ▲ Just under 2.8 million tonnes of municipal waste was generated.
- ▲ The recycling rate for municipal waste stagnated at 40 per cent.
- ▲ All relevant targets for packaging waste, WEEE and waste batteries were met.
- ▲ The reuse & recycling target for ELVs was met.
- ▲ There was a reliance on export markets for the treatment of residual & recyclable and hazardous wastes.

The European Commission's 2018 Circular Economy Package has given rise to ambitious new EU targets for waste packaging, food waste, reuse, single-use plastics and landfill disposal, which are likely to prove challenging for Ireland.

### Persistent organic pollutants

Persistent organic pollutants (POPs) are substances that persist in the environment, bioaccumulate through the food chain and pose a risk to human health and/or the environment. This group of priority pollutants consists of pesticides (such as DDT), industrial chemicals (such as polychlorinated biphenyls (PCBs) and unintentional by-products of industrial processes (such as dioxins and furans).

European Communities Regulation on POPs ensures that EU and Member States fulfil commitments under international agreements such as the Stockholm Convention on Persistent Organic Pollutants. The EPA is the competent body for compiling the data required for reports under the Regulation. Article 12 of the Regulation requires annual reporting by Member States on the actual production and use of POPs, and triennial reporting on the implementation of other provisions of the Regulation (collectively known as "Article 12 Reports"). Both reports were required in 2019.

The annual report, as per previous years, indicated no POPs were intentionally produced or placed on the market during 2018. The triennial report, covering the years 2016–2018 inclusive, provided the following key insights:

- ▲ The levels of POPs found in the Irish environment and food, detected as part of the reported monitoring programmes, were generally low when compared to other Member States and/or permitted standards.
- ▲ Stockpiles of permitted POPs (i.e. PCBs) continued to decline over the three-year period, primarily due to improved action by the holders of this material and awareness-raising and compliance promotion activities of the EPA and local authorities.
- ▲ Information regarding POPs in the Irish environment continues to improve in both quantity and quality. The report quoted information from recent monitoring and

focused research programmes, e.g. Water Framework Directive Monitoring, the GAPS-related study and Farm Hazardous Waste campaigns.

- ▲ The GAPS-related study reported detection of POPs in samples from three Irish lakes. The discovery of quantifiable levels of Mirex (insecticide) in samples from two of the lakes is particularly noteworthy as the Department of Agriculture Food and Marine (DAFM) has reported that the substance was not approved for use within Ireland.
- ▲ More work is necessary to further develop the knowledge base in relation to POPs within the Irish context as outlined in the National Implementation Plan.

### Environment laboratory services

The EPA undertakes laboratory analysis to support the implementation of monitoring programmes, licensing, enforcement, and the Water Framework Directive.

The EPA laboratories in Castlebar, Dublin, Kilkenny and Monaghan, and sampling team in Cork carry out monitoring, analysis and reporting of samples taken for enforcement at licensed facilities, auditing poultry and waste water treatment sites. The laboratories also analyse samples from rivers, lakes, groundwaters and transitional & coastal waters under the National Monitoring Programmes for the WFD. During 2019, the laboratories carried out a range of analyses on 15,976 samples. A breakdown of the sample numbers analysed in 2019 is provided in Figure 9.

In 2019 (and in all years since 2016), 95 per cent of WFD river and lake samples nationally were collected by local authority staff and analysed by the EPA's water laboratories with the remaining 5 per cent of samples analysed by Dublin City Council. This arrangement came to an end in 2019, and all river and lake samples will be analysed by EPA from 2020. All WFD data are made available to local authorities as well as being used by the EPA for WFD assessment purposes. While the WFD analytical work is carried out by the EPA, sampling is carried out by local authorities and the quality of sampling is assured through an auditing programme conducted by the EPA. In 2019, sixteen audits were carried out against the requirements of EPA's WFD sampling manual.

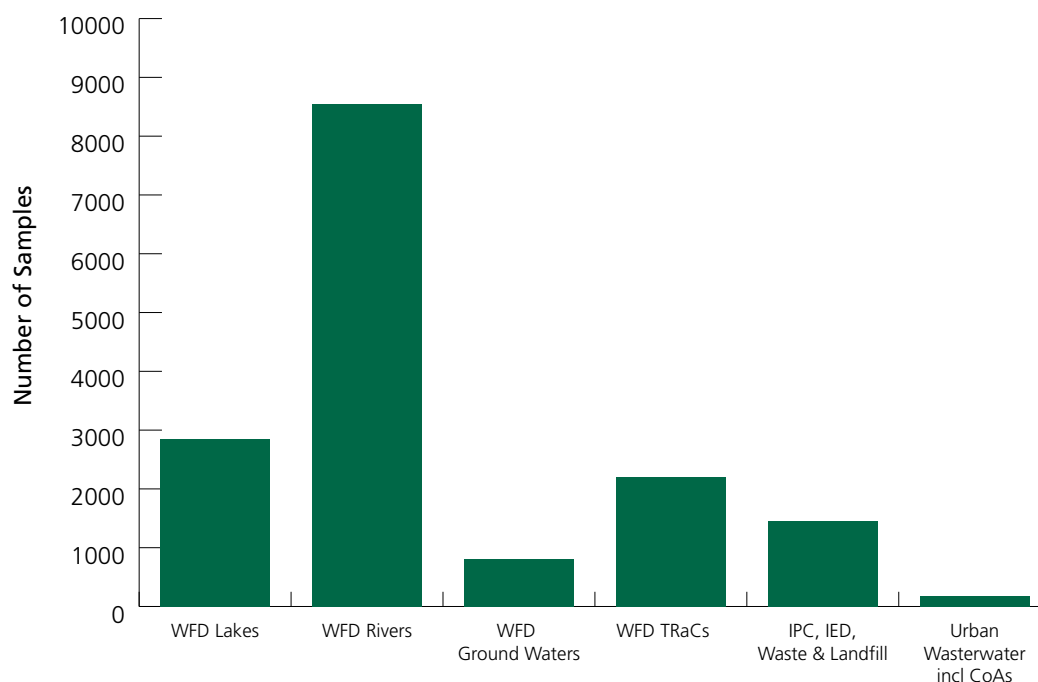
In November 2019, the air, radiation and water laboratories were audited against the requirements of the new ISO 17025:2017 standard by the Irish National Accreditation Board (INAB). This marked the successful integration of the radiation monitoring and measurement services under the scope of the consolidated multi-site accreditation, the transition to the new 2017 standard and the inclusion of the Total Organic Carbon test in the extended scope of accreditation. The flexible scope granted to the water laboratories in 2018 (allowing certain additions to its scope of accreditation between INAB visits) was also maintained.



In late 2018, work commenced on the introduction of Lean to the laboratories. Lean tools, including process mapping, performance targets for turn-around times and

the implementation of the 5S workplace organisational tool, were introduced during 2019 with support from local Lean champions.

**Figure 9.** Number of samples, by type, analysed by EPA water laboratories in 2019



## Radiation monitoring

### Radon measurement service

The EPA's radon measurement laboratory closed on 1 August 2019. After nearly 30 years in operation it stopped selling detectors on 31 October 2018 but retained capability for nine months to process detectors sold to that date. The laboratory was originally established to provide a radon measurement service to the public and employers at a time when there was no other laboratory in Ireland providing this service but since then several commercial measurement services have been established. The EPA operates a registration scheme for these services, with requirements on proof of proficiency, tax compliance and appropriate insurance.

### Instrument calibration service

The EPA's Instrument Calibration Service supports the monitoring of radiation levels and radiation safety in the workplace by providing an accredited calibration service for a range of radiation protection instruments, including survey meters, contamination meters and electronic personal dosimeters.

The service continued its programmes throughout the year to calibrate EPA, Defence Forces and Civil Defence instruments as well as those of commercial customers in the medical, industrial and education sectors. In 2019, the laboratory

upgraded equipment and reference standards, participated in international inter-comparison schemes and an International Atomic Energy Agency (IAEA) audit to consolidate its status as Ireland's only Secondary Standard dosimetry laboratory. Work progressed on streamlining and modernising the service, moving to a paperless booking system for instruments through the introduction of an online laboratory information management system.

### Radioanalytical services

The EPA measures radioactivity in a wide range of foodstuffs and environmental samples. This work is undertaken both in support of the EPA's environmental radioactivity monitoring programme and on a contract basis for external clients.

The contract analytical services provided during 2019 included:

- ▲ Testing of Irish produce for compliance with the requirements of importing countries.
- ▲ Testing of drinking water for compliance with the requirements of the European Communities Regulations.
- ▲ Testing of wipe-tests undertaken on radioactive sources.
- ▲ Testing of dredged samples for compliance with the requirements of the Dumping at Sea Act 1996, as amended.

In total, 672 samples were tested during 2019.

The 2019 radiation monitoring programme involved sampling and testing for radioactivity in air, drinking water, soil, seawater, seaweed, sediments, fish, shellfish, mixed diet and other foodstuffs as well as the continuous measurement of the ambient gamma dose rate at fixed monitoring stations around the country. The national surveillance programme for radioactivity in drinking water continued in 2019. A total of 780 samples were analysed for various monitoring programmes during the year. The findings of this monitoring showed that, although the levels of artificial radioactivity in the Irish environment remain detectable, they are low and do not pose a significant risk to human health.

The EPA also supports the Irish food and agriculture industry through the assessment of the radioactivity status of Irish foodstuffs. This assessment provides the basis for certifying radioactivity in produce for export following the 1986 Chernobyl accident. The number of product certificates issued in 2019 was 4,256

### National Radiation Monitoring Network

The EPA, with the assistance of Met Éireann, Defence Forces, local authorities and third-level institutes operate the National Radiation Monitoring Network. This network of equipment, located throughout the country, is designed to detect radioactivity in Ireland, if any, following a major incident at an overseas nuclear facility.

The Network currently includes 15 dose-rate monitors that send live data to the EPA website as well as to the European Commission and International Atomic Energy Agency (IAEA). Five instruments measure radioactivity captured by aerosol filters and send live data to the EPA for analysis. An additional seven aerosol samplers and ten rainwater collectors continuously gather samples for offline analysis in the EPA.

During 2019, the information and communications technology infrastructure of the Network was upgraded. Updated field equipment was tested, in consultation with host organisations, in preparation for renewal of the network in the coming years.



Monitors in the National Radiation Monitoring Network



## Non-ionising radiation

In May 2019, the EPA was assigned statutory responsibilities related to the public exposure to non-ionising radiation in the frequency range commonly referred to as Electromagnetic Fields (EMF).

No adverse health effects have been proven at EMF exposure levels below international guidelines as set out by the International Commission on Non-Ionising Radiation Protection (ICNIRP). The ICNIRP guidelines are endorsed by the World Health Organization (WHO) and the European Commission. EMF are generated by items such as mobile phones and electrical appliances. The deployment of 5G technologies across Ireland is not expected to increase the public EMF exposure to levels close to the ICNIRP values. Nonetheless, the deployment of 5G technology during 2019 caused concern among some members of the public with some local authorities voting to stop roll-out of the technology locally. To help address people's questions on 5G and its impact on health, new content dealing with 5G technologies was added to the EPA website: [www.epa.ie/radiation/emf/whatisemf/rf/newrfttechnologies-5g/](http://www.epa.ie/radiation/emf/whatisemf/rf/newrfttechnologies-5g/)

During 2019, site measurements were made near a newly installed 5G infrastructure in Hanover Quay in Dublin, in collaboration with an accredited EMF measurement company. These were the first such measurements of 5G carried out by the EPA

The results showed that:

- ▲ The measured EMF levels in the area were very low.
- ▲ The EMF levels, measured when the 5G technology was switched on, were comparable with those measured when the 5G was switched off and comparable with everyday EMF levels found in urban areas.
- ▲ The measured EMF levels were about 2 volt per metre (V/m) – far below the most restrictive reference level of 28 V/m set by the ICNIRP.

## Ecosystems Monitoring and Reporting

The revised National Emissions Ceiling (NEC) Directive (2016/2284) requires Member States to ensure the monitoring of negative impacts of air pollution upon ecosystems based on a network of sites that is representative of their freshwater, natural and semi-natural habitats and forest ecosystem types, taking a cost-effective and risk-based approach. The lack of a formal network was identified as a gap in the revised NEC Directive, with a need for a long-term network to be put in place to provide direct assessment of the impacts of air pollution on ecosystems.

A list of proposed monitoring sites was submitted to the European Commission in 2018, which included the following proposed site types for Ireland:

- ▲ Raised bogland – one site.
- ▲ Grassland – one site.
- ▲ Forestry (Level II – detailed monitoring) – two sites.
- ▲ Forestry (Level I – periodic monitoring) – 35 sites.
- ▲ Acid Lakes – three sites.

The Commission undertook a review of the country submissions and provided feedback in November 2019 on the proposed monitoring sites and the parameters to be monitored. In summary, the feedback indicated:

- ▲ Additional monitoring sites would be useful, representing grassland and peatland habitats.
- ▲ Inclusion of additional terrestrial key parameters should be considered.

Available monitoring data for the identified sites was submitted to the European Commission in advance of the July 2019 reporting deadline. A review of the submitted data is being undertaken by the European Commission and the findings of this assessment are expected in April 2020.

## Noise

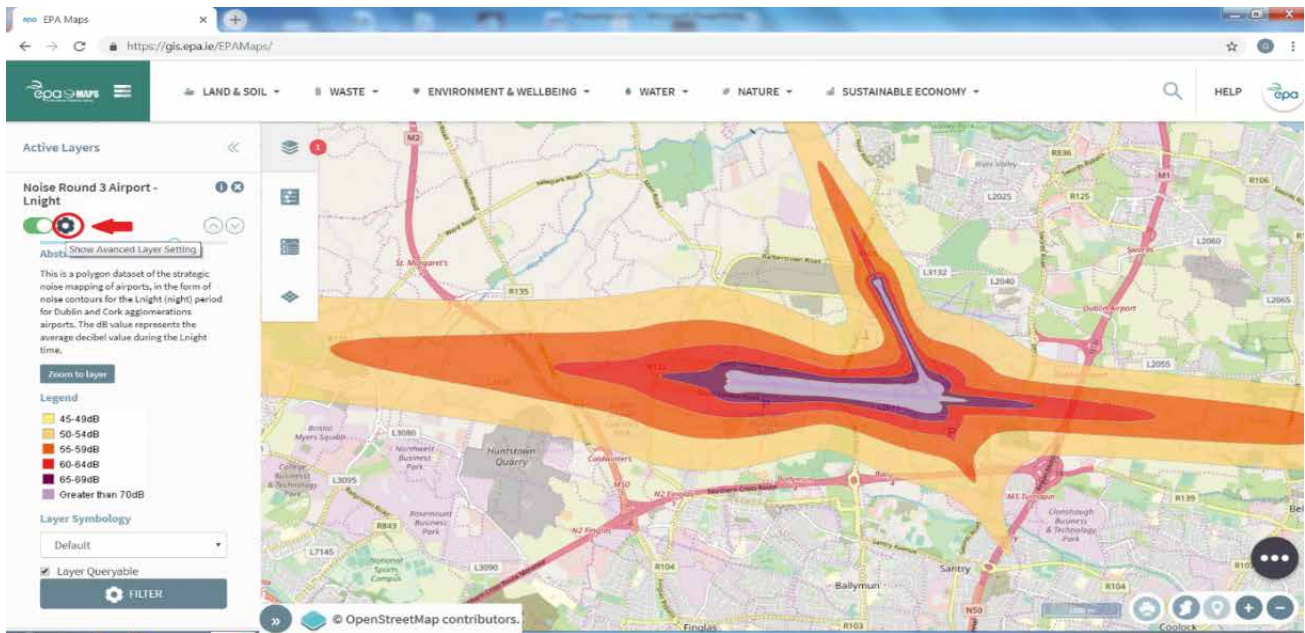
The Environmental Noise Directive (END) requires Member States to prepare and publish, every five years, strategic noise maps and noise management action plans.

The EPA is the national authority for overseeing the implementation of the Directive. This role includes supervisory, advisory and coordination functions in relation to both noise mapping and action planning, as well as various reporting requirements of the Directive.

During 2019, Round-4 noise mapping commenced using the common noise assessment and modelling methodology (CNOSSOS-EU). These new assessment methods will require significant additional preparation and input, including guidance, to ensure delivery of the next round of noise maps in 2022.

In compliance with the INSPIRE Directive, the EPA created metadata for datasets that includes noise. The EPA also submitted a brief report to the European Environment Agency (EEA) on the EPA's approach to Round-3 industrial noise mapping.





Round-3 Noise mapping

Round-4 noise mapping also commenced during 2019. This is being carried out using the common noise assessment and modelling methodology (CNOSSOS-EU). These new assessment methods will require significant additional preparation and input, including development of new guidance, to ensure delivery of the next round of noise maps in 2022.

EPA organised four meetings of the END Noise Steering Group and a workshop for local authorities on the Round-4 noise mapping process.



**Effective management of the environment is increasingly science-driven. Through its research programme, the EPA is generating the knowledge and expertise to identify pressures, inform policy and develop solutions to environmental challenges.**

### 3.2 RESEARCH

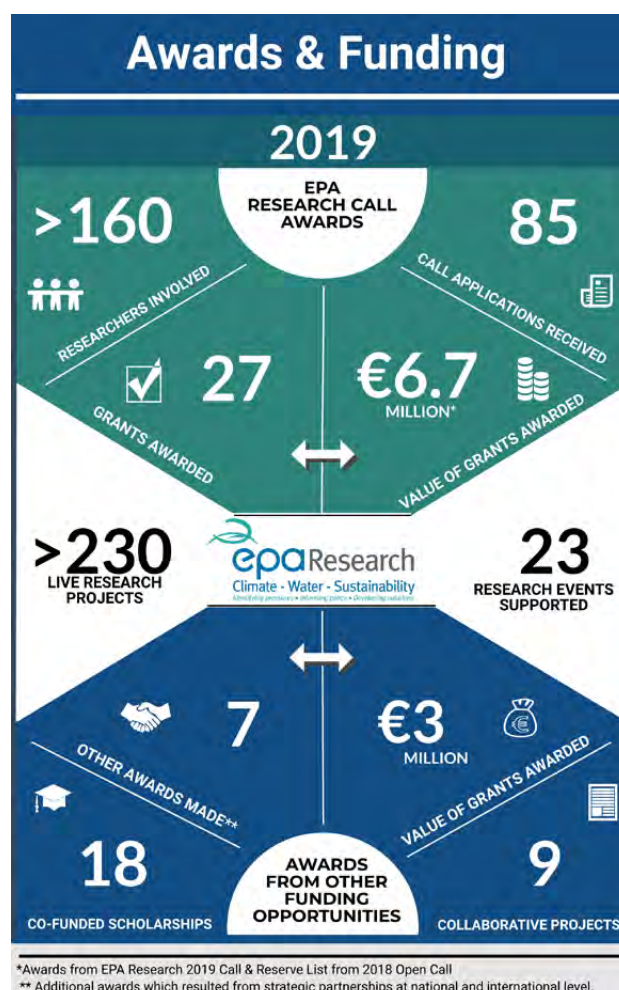
The EPA has a statutory responsibility for the coordination of environmental research in Ireland. This research has greatly assisted Ireland in meeting and addressing national challenges as well as international obligations at EU and United Nations levels in the areas of climate change, water quality, air quality, sustainability, health and the environment, and biodiversity.

EPA-funded environmental research provides essential scientific support for environmental policy development and implementation and broader decision-making. Since 1994, the EPA has funded research that has increased national understanding of our environment, the challenges it faces and responses to these challenges. It has also developed high-quality research capacity and supported innovation that is internationally respected.

#### New awards in 2019

In 2019, the EPA committed €10 million to fund new research projects, as part of its competitive Research Calls. Co-funding for the 2019 EPA Research Calls in areas of mutual interest was secured from seven state bodies: The Department of Agriculture Food and the Marine, the Marine Institute, the Office of Public Works, the National Parks and Wildlife Services, Met Éireann, the Department of Transport, Tourism and Sport and the WEEE Compliance Schemes (WEEE Ireland and European Recycling Platform).

Under the 2019 EPA Research Calls, a total of 27 (14 on climate, 8 on sustainability and 5 on water) awards were made. In addition, 28 knowledge transfer events received financial support via the Event Support Grant. More details are available at: [www.epa.ie/researchandeducation/research/epafunding/researchawards/](http://www.epa.ie/researchandeducation/research/epafunding/researchawards/).







## Research management and communication

The EPA managed 280 ongoing research projects in 2019 and published 43 new research reports that are listed in Appendix 6.3 and are available for download from the EPA website: [www.epa.ie/researchandeducation/research/researchpublications/researchreports/](http://www.epa.ie/researchandeducation/research/researchpublications/researchreports/).

In February and March 2019, the EPA held a series of well-received roadshows in Irish third-level institutions to promote the research programme and encourage wider engagement.

In September 2019, the EPA published the results of an independent performance review of the Research Programme undertaken by Indecon International Economic Consultants. Indecon's analysis concluded that the EPA Research Programme was aligned with the national objectives set for environmental research, and that the programme was appropriately structured and has supported significant research in the environmental area which indicates that the Research Programme is likely to achieve its key objectives. Indecon made seven over-arching recommendations designed to assist the EPA in having an evidence base to measure the impacts of the Research Programme and to enhance the impacts of the Programme:

1. Implement Mechanisms to Inform Short-Term Policy Decisions
2. Increase Investment in Promotion and Dissemination of Research Findings
3. Adjust Aspects of Planning and Monitoring for Next Programme
4. Introduce Refinement to Administration of Programme
5. Encourage Greater Collaboration with Enterprise
6. Consider Support for Key Large-Scale Research Projects
7. Facilitate Greater Engagement with EU Programs for Research and Innovation

## National linkages

EPA Research has been actively involved in national activities regarding Innovation 2020 – Ireland's five-year strategy on research and development, science and technology. Innovation 2020 sets out the roadmap for continuing progress towards the goal of making Ireland a global innovation leader, driving a strong sustainable economy and a better society. The fourth progress report for Innovation 2020 was published in 2019 and included activities from the EPA research programme.



## Research coordination

The EPA operates three national Research Coordination Groups focusing on Sustainability, Water and Climate. These networks facilitate and promote coordination and synergies between relevant cross-sectoral funding organisations, identify knowledge gaps and reduce the fragmentation and/or duplication of environmental research in Ireland. The research coordination groups met three times during 2019.

The National Mitigation Plan contains an action for the Climate Research Coordination Group to prepare an annual report on its activities. The first annual report was published in June 2019: [www.epa.ie/pubs/reports/research/climate/climateresearchcoordinationgroupreport.html](http://www.epa.ie/pubs/reports/research/climate/climateresearchcoordinationgroupreport.html).



## Strategic partnerships

Under the 2018/2019 EPA–Irish Research Council postgraduate scholarship scheme, twelve awards were made in 2019. The EPA also agreed to provide co-funding to the SFI Frontiers for the Future Programme, as well as to the 2019 DAFM Call.

The EPA continued to work closely with the Economic and Social Research Institute (ESRI) and in 2019, seven Projects were funded under Phase 2 of the ESRI Research Programme. The final report from the EPA-ESRI Research Framework Phase 1 was published in 2019: [www.epa.ie/researchandeducation/research/researchpublications/researchreports/research295.html](http://www.epa.ie/researchandeducation/research/researchpublications/researchreports/research295.html)

## International linkages

The EPA has continued its role as National Delegate and Contact Point to support researchers in the preparation of proposals under the EU's Horizon 2020 Societal Challenge 5 programme. The results for the 2019 Work Programme were very good with over €7m drawdown for Irish researchers bringing the total drawdown to nearly €25m since the start of Horizon 2020.

The EPA has also actively participated in:

- ▲ BiodivERSA network: with four transnational projects with Irish partners awarded in 2019 on the topic of Biodiversity and health. In addition, the EPA committed €0.5million of funding for the 2019-2020 BiodivERSA Joint Call on Biodiversity and Climate Change, with additional co-funding of €150,000 from the NPWS.
- ▲ Water Joint Programming Initiative: with four transnational projects with Irish partners awarded in 2019 on the topic of sustainable water management.
- ▲ Climate Joint Programming Initiative: with one project with Irish partners awarded in 2019 on the topic of cross-sectoral impacts of climate change. The EPA has also committed €0.5million of funding for the 2019-2020 Climate JPI Joint Call on societal transformation (SOLSTICE). The EPA actively contributed to the Climate JPI with an EPA senior scientist chairing the programme initiative.
- ▲ CONCERT-European Joint Programme for the Integration of Radiation Protection Research": with the Irish participation in two CONCERT projects' PODIUM' and 'VERIDIC' continuing in 2019

In addition, the EPA contributed to the ShARE 5 Agencies research programme. ShARE is a flexible framework for research and evidence collaboration between the five environment agencies of Ireland and the United Kingdom. The EPA has also continued its partnership with the Fulbright Commission as part of their 2019 Call (awards to be in 2020).





## Provide timely and tailored information to meet the specific needs of stakeholder groups

### 3.3 TIMELY AND ACCESSIBLE INFORMATION

The EPA's collection, management and analysis of data provides efficiencies for both the EPA and those it regulates. Building on its data collection functions, the EPA monitors and reports on Ireland's environment and regulated entities. The EPA provides independent, evidence-based information, in an open and transparent manner that informs decision making by a broad range of stakeholders including government, non-governmental organisations, state agencies, industry and the public. Information is provided in a timely and accessible manner, principally through online resources.

#### Online resources

##### Ireland's Environment

The Ireland's Environment web resource ([www.epa.ie/irelandsenvironment](http://www.epa.ie/irelandsenvironment)) provides environmental data on an easy-to-navigate platform.

Information is available in accessible formats including videos, charts, infographics and factsheets compiled under eight environmental themes: air, climate, water, waste, nature, land and soil, environment and wellbeing, and sustainable economy.

The web resource was updated regularly during 2019, with new data from published reports being made available on the environmental indicators and information pages.



##### Air quality

The EPA's air quality webpages ([www.epa.ie/airquality](http://www.epa.ie/airquality)) were updated in 2019 to display more real-time air quality information from a substantially expanded national monitoring network. This web resource provides an Air Quality Index for Health (AQIH) that translates measured data into a scale indicating how good or poor the air quality is. The scale is linked to health advice for the public and those vulnerable to poor air quality. As well as the website, the twitter feed, @EPAAirQuality, also kept the public up to date with air quality in their AQIH region.

The EPA continued to provide real-time data for selected air pollutants to the European Environment Agency (EEA) for display on European air quality maps.

##### Emissions inventories and projections

In 2019, a new greenhouse gas emissions web resource ([www.epa.ie/ghg](http://www.epa.ie/ghg)) was developed that brings together both inventory and projections data in an integrated, readily accessible format. In addition to providing the latest data, the resource also features an archive of historic reports and publications, information on where Ireland is in relation to its international commitments and an FAQ section to address common queries. An infographic was also created to highlight the actions that can be taken at a national level and as individuals. A summary factsheet was created to provide at-a-glance key messages.



Web resource for national inventory and projections of greenhouse gas emissions

### Radon

The EPA is the main provider of information and guidance to stakeholders in relation to radon gas. During 2019, the radon web resource ([www.epa.ie/radon](http://www.epa.ie/radon)) continued the provision of helpful and practical advice on radon testing and remediation for householders, businesses and building professionals. In total, radon-related pages were viewed almost 100,000 times during 2019. In addition, a freephone radon advice number is provided by the EPA 24 hours a day, 7 days a week.



*wastecharacterisation*), two further characterisation projects, looking at litter and street-sweeping waste, were carried out in 2019. Outputs from these projects will be available in early 2020.

National statistics on reuse and recycling and reuse and recovery of end-of-life vehicles (ELVs), WEEE and packaging for the 2017 reference year were submitted to the European Commission via the DCCAE.

### Water Quality

The public facing website for the Water Framework



Directive (WFD) ([www.catchments.ie](http://www.catchments.ie)) continues to provide a single source of water quality data and information in Ireland. Maps, dashboards, trends and charts are publicly available for almost 5,000 water bodies. The EPA also distributes the Catchments Newsletter to over 3,000 email subscribers and to local groups and individuals.

The EPA provides hydrometric data on river flows and lake and groundwater levels to support water resource and flood risk management and a variety of other activities. Data are available to view and download via the EPA's HydroNet web pages: [www.epa.ie/hydronet/](http://www.epa.ie/hydronet/).



### National waste statistics

The EPA's National Waste Statistics web resource ([www.epa.ie/nationalwastestatistics/](http://www.epa.ie/nationalwastestatistics/)) continues to provide the most recent available waste data for Ireland. During 2019, data releases were published for a range of waste streams including municipal, packaging, hazardous, composting, waste electrical and electronic equipment (WEEE), and construction & demolition waste. In addition, the sections on waste infrastructure, indicators and 'progress to targets' were updated with the latest available data.



Up-to-date waste characterisation analysis is essential for improving statistical reporting and informing policy. To supplement the municipal waste characterisation study published in 2018, ([www.epa.ie/pubs/reports/waste/](http://www.epa.ie/pubs/reports/waste/)



## Drinking water

The EPA's Remedial Action List (RAL) is a list of the public water supplies with the most serious problems. Action must be taken at these supplies to reduce the risk to the water quality. The RAL is updated quarterly ([www.epa.ie/water/dwl/rall/](http://www.epa.ie/water/dwl/rall/)) and gives the location of each supply, the reason the supply is on the RAL and the planned completion date for the remedial works.

## Wastewater

The EPA's Priority Urban Area List is a list of areas where the waste water discharges are having an impact on the environment or are failing to meet minimum standards. Information on the EPA's Priority Urban Area List is also available on the EPA Sewage Treatment Maps: <https://gis.epa.ie/EPAMaps/SewageTreatment>.

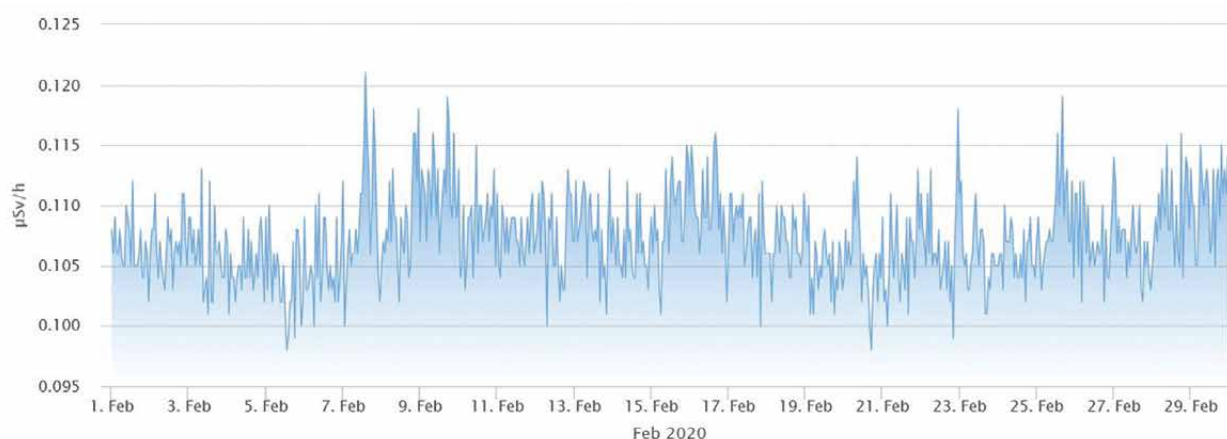
## Beaches

The Beaches web resource ([www.beaches.ie](http://www.beaches.ie)) provides information about bathing water quality at Ireland's beaches and lakes. The site provides a range of bathing information, including the recent water quality at their beach, any swim restrictions that are in place, weather and tide information. The site is regularly updated during the summer as results of monitoring become available from local authorities. Details of pollution incidents and remedial actions are also made available on a dedicated twitter feed (@EPABeaches).



## National Radiation Monitoring Network

The EPA operates a National Radiation Monitoring Network consisting of equipment, located throughout the country, designed to detect radioactivity in Ireland, if any, following a major incident at an overseas nuclear facility. Live data is available on the EPA website: [www.epa.ie/radiation/monassess/mapmon/](http://www.epa.ie/radiation/monassess/mapmon/).



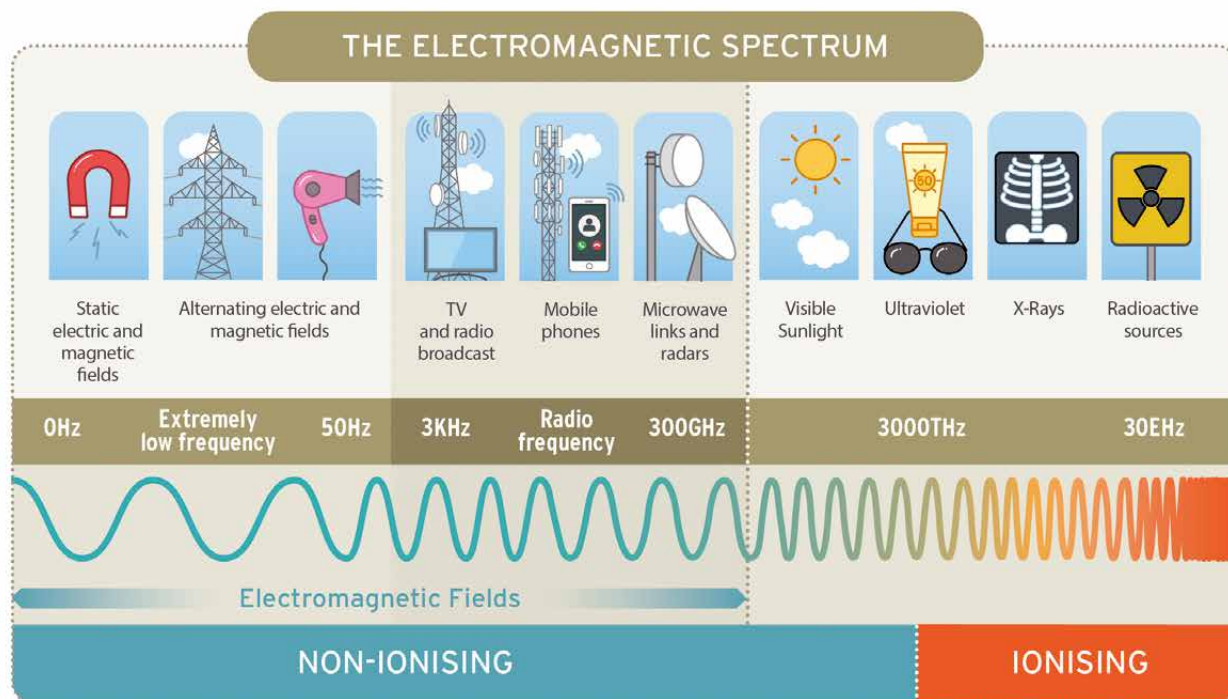
Ambient gamma dose rate monitoring at Johnstown Castle Estate, Co. Wexford





## Non-ionising radiation

In 2019, the EPA published dedicated webpages setting out its role among other state agencies and information for the public on the characteristics of EMF and the health effects: [www.epa.ie/radiation/emfi/](http://www.epa.ie/radiation/emfi/).



## GeoPortal map resources and Open Data initiatives

The EPA Open Data programme continued during 2019 with 296 EPA spatial datasets published to-date and over 38,000 views. The concept of Open Data is about making data held by public bodies available and easily accessible online for reuse and redistribution.

The EPA expanded the open data Application Programming Interfaces (API) to include Bathing Water, Water Framework Directive and Medium Combustion Plants. An API is a way to package open data so that they can be readily used by open data applications and developers. The API's are available on: <https://data.epa.ie/>. New EPA API's will be added to this page so that open data developers can find all EPA open data API's in one place.

## Pollutant Release and Transfer Register

Ireland's Pollutant Release and Transfer Register (PRTR) (<http://prtr.epa.ie/map/default.aspx>) provides a publicly accessible and searchable database which members of the public can use to search for facilities in Ireland that are releasing pollutants in excess of specific thresholds or making off-site transfers of waste above specified thresholds for non-hazardous and hazardous wastes. The register also fulfils requirements of the Aarhus Convention, as a simple means of affording access to information about environmental emissions and transfers.



## Licensing and Permitting

As part of the EPA's policy of openness and transparency and in accordance with the Access to Information on the Environmental Regulations and various licensing/permit regulations, licensing files are available for public inspection. To provide greater access to all stakeholders, the EPA displays application files and related documents for public viewing purposes.

Information on Industrial Emissions (IE) and Integrated Pollution Control (IPC) applications, received since December 2004, and all Inspectors' reports and licences issued to-date are available on the EPA website: [www.epa.ie/terminalfour/ippc/index.jsp](http://www.epa.ie/terminalfour/ippc/index.jsp). Since December 2017, all applications are received online and the majority of interactions with the applicants and the public are electronic and published on the EPA website, including the receipt of submissions and objections.

During 2019, there were almost 400,000 unique pageviews of the IE/IPC licence search web pages. By the end of 2019 there were over 4800 submissions received from the public using the user-interface.

Other relevant files available include:

- ▲ Waste applications, received since December 2004, and all Inspectors' reports and licences issued to-date at: [www.epa.ie/terminalfour/waste/index.jsp](http://www.epa.ie/terminalfour/waste/index.jsp).
- ▲ Volatile Organic Compound (VOC) permit applications and related documents, received since January 2007, at: [www.epa.ie/terminalfour/VOC/index.jsp](http://www.epa.ie/terminalfour/VOC/index.jsp).

- ▲ Dumping at Sea (DaS) applications and related documents, received since February 2010, at: [www.epa.ie/terminalfour/DaS/index.jsp](http://www.epa.ie/terminalfour/DaS/index.jsp).
- ▲ Waste Water Discharge applications, received since December 2007, at: [www.epa.ie/terminalfour/wwda/index.jsp](http://www.epa.ie/terminalfour/wwda/index.jsp).
- ▲ Historic Landfill applications and related documents, received since May 2009, at: [www.epa.ie/terminalfour/HLF/index.jsp](http://www.epa.ie/terminalfour/HLF/index.jsp).
- ▲ Medium Combustion Plant Registrations, issued since January 2019, at: [www.epa.ie/mcp/](http://www.epa.ie/mcp/)
- ▲ Greenhouse Gas Permits at: [www.epa.ie/climate/emissionstradingoverview/etscheme/accesstocurrentpermits/](http://www.epa.ie/climate/emissionstradingoverview/etscheme/accesstocurrentpermits/)
- ▲ Article 27 (By-Product Notifications) Register at: <http://web.epa.ie/Article27Register/>
- ▲ Article 28 (End of Waste) Decisions at: <http://www.epa.ie/waste/wastereg/art28/Radon>

## Enforcement information

In 2019, the EPA continued to enhance public access to enforcement information by publishing the list of National Priority Sites for Enforcement on a quarterly basis. The list identifies the industrial and waste licensed sites with the poorest compliance records over the previous six-month period. A report on industrial and waste licence enforcement was also published in July.

The online publication of key enforcement documents such as inspection and monitoring reports for licensed sites continued.

A scenic landscape featuring a calm lake in the foreground, reflecting the surrounding environment. The lake is bordered by dense forests of evergreen and deciduous trees. In the background, a large, dark mountain peak rises against a sky filled with heavy, grey clouds. A small, light-colored building is visible on the far shore of the lake. A large, white, stylized number '4' is positioned on the right side of the image, partially overlapping the forest and the lake's reflection.

# 4

**“ Work with others to advocate for a clean, healthy and well protected environment and sustainable environmental behaviour. ”**



To deliver on our strategic objectives, we will continue to work with and through others to effect positive outcomes for the environment.

## 4. ADVOCACY

### 4.1 PARTNERING AND NETWORKING

#### Oireachtas committees

The EPA welcomes the opportunity to engage with and inform Joint and Select Committees of the Oireachtas in their legislative and administrative oversight functions. During 2019, the EPA was invited to present the Annual Report and Accounts 2017 to the Oireachtas Public Accounts Committee. In addition, the EPA briefed the Joint Committee for Communications, Climate Action and the Environment and the Joint Committee on Housing, Planning and Local Government. Topics included septic tanks, drinking water and waste water quality and the ESB cable leaks.

#### Oversight Agreement

In line with requirements of the Code of Practice for the Governance of State Bodies, a written Oversight Agreement that clearly defines the relationship between the parent Department and the EPA is in place with the Department of Communications, Climate Action and Environment (DCCAE). The Oversight Agreement recognises that the Department of Housing, Planning and Local Government (DHPLG) has responsibility for several areas of direct relevance to the EPA's remit and defines the EPA's relationship with DHPLG.

A Performance Delivery Agreement forms part of the Oversight Agreement and focuses on the key priorities and objectives of the EPA. The agreement defines clear service ownership and accountability in relation to the roles and responsibilities of each party with a view to ensuring that the statutory functions of the EPA are discharged in an efficient and effective manner.

#### Memoranda of Understanding/Service Level Agreements

The EPA has adopted Memorandum of Understanding (MoU) agreements and Service Level Agreements (SLAs) with various organisations that involve or contribute to matters relating to the environment. The EPA currently has MoUs/SLAs with the following:

- ▲ An Bord Pleanála
- ▲ Central Statistics Office
- ▲ Climate Change Advisory Council
- ▲ Commission for Regulation of Utilities
- ▲ Department of Agriculture, Food and the Marine
- ▲ Department Culture, Heritage and the Gaeltacht (National Parks and Wildlife Service)
- ▲ Department of Communications, Climate Action and Environment, Kilkenny County Council and Galmoy Mines Ltd
- ▲ European Atomic Energy Community
- ▲ Food Safety Authority of Ireland
- ▲ Health and Safety Authority
- ▲ Health Service Executive
- ▲ Met Éireann
- ▲ National Directorate for Fire and Emergency Management
- ▲ Office for Nuclear Regulation (UK)
- ▲ Office of Public Works
- ▲ UK Drinking Water Regulators.
- ▲ Waterford Institute of Technology

MoUs are published on the EPA website when agreed with the other party.

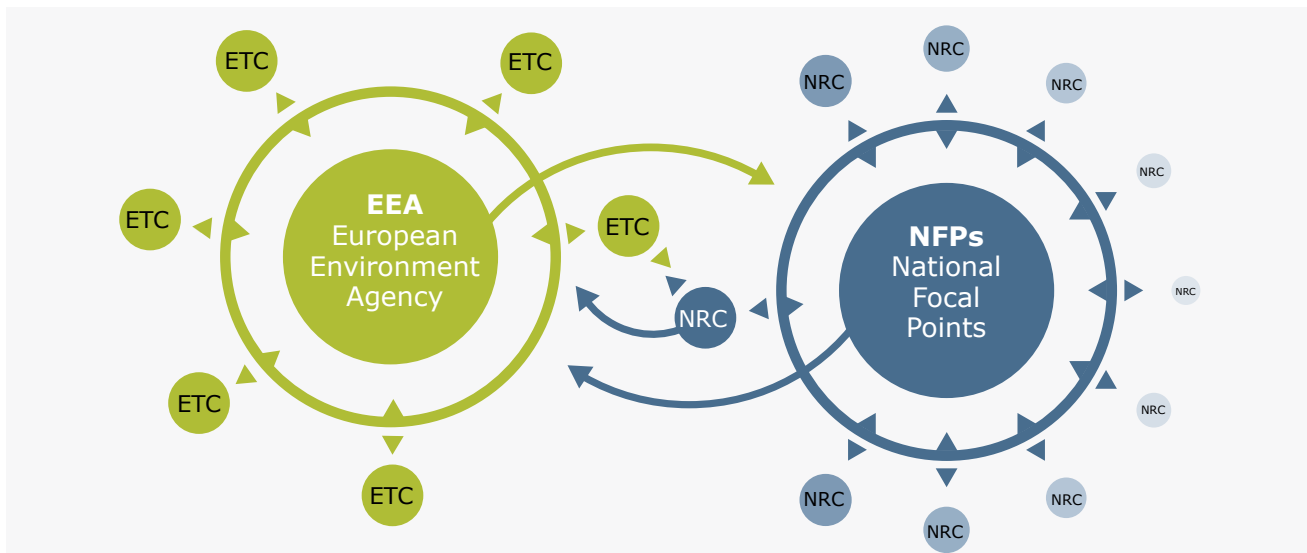
## European Environment Agency

The European Environment Agency (EEA) provides independent environmental information for the public and those involved in developing, adopting, implementing and evaluating environmental policy. The EEA gathers data and assesses on a wide range of topics related to the environment. This work is done in close collaboration with the 33-member countries of the European environmental information and observation network (Eionet – Figure 10). In December 2019, the EEA published its flagship report: 'The European Environment – state and outlook 2020'.

The EPA continues to play an active and supportive role in the work of the EEA. As the nominated National Focal Point, the EPA coordinates Ireland's participation in the work of the European agency. As such, the EPA provides environmental data and input across a range of topic areas through its

EEA National Reference Centres. This work ensures that Ireland fulfils its data reporting obligations to the European Commission. It also benefits Ireland by providing national contacts with the latest information about issues, challenges and solutions as well as access to a European knowledge community of experts.

Laura Burke, Director General of Ireland's EPA, serves as the current Chairperson of the EEA Management Board which represents all EEA member countries, the European Commission and European Parliament. The EPA is actively involved with the European Network of the Heads of Environment Protection Agencies (NHEPA), an informal network of the heads and directors of environment protection agencies and similar bodies across Europe. The network exchanges views and experiences on issues of common interest to the organisations involved in the practical day-to-day implementation of environmental policy.



**Figure 10.** European Environment Information and Observation Network (Eionet) Source: European Environment Agency (EEA)

## Climate change

The EPA worked on several international climate issues during 2019 including representing Ireland at three meetings of the Intergovernmental Panel on Climate Change (IPCC) during which three new reports were adopted:

- ▲ Updated good practice guidelines to be used in reporting and accounting of greenhouse gas emissions and removals – central to the development of national emissions inventories.
- ▲ Special Report on Land – Ireland played a major role in the development of this report by hosting the expert scoping meeting for the report as well as a lead author meeting ahead of its finalisation.
- ▲ Special Report on Oceans and Cryosphere.

Together, these reports were presented to the UN Framework Convention on Climate Change (UNFCCC) ministerial meeting in Madrid at which steps on further action to consider their findings were agreed. The EPA provided expert support to the DCCAE at the Madrid meeting and a meeting of officials in June. Science issues were a strong focus of both meetings with the EPA leading in promoting the EU position.

The EPA provides secretariat support to the Climate Change Advisory Council (CCAC). During 2019, the CCAC prepared and published the third statutory report, required of the Council under the Climate Act 2015. The report contained a special focus chapter on agriculture. The CCAC also published two research papers under the 'Council Working Paper Series'. Advice on a suitable approach to the preparation of multi-annual carbon budgets was prepared for the DCCAE on foot of the Climate Action Plan. The Secretariat supported the appearance of the Council Chair at the Joint Oireachtas

Committee on Climate Action. Two workshops on transport and carbon budgeting were held in 2019. The Secretariat arranged and ran five full Council meetings and four Adaptation (sub-committee) meetings during the year.

The EPA supports the DCCAE on the roll out and delivery of the National Dialogue on Climate Action (NDCA). Under the Climate Action Plan the NDCA piloted several local level meetings. In addition, it conducted a review of how the NDCA might connect with and leverage local level and youth activities. Two research projects on public engagement on climate action were published in collaboration with University College Cork. The NDCA supported several local level activities such as ECO UNESCO Young Environmentalist Awards and an intergenerational climate conference in Cork. The EPA presented at national and local level meetings including the Climate Action Regional Office management meetings. In addition, the EPA provided input on key sectoral plans through the strategic environmental assessments process and sectoral adaptation strategies under National Adaptation Framework.

## Citizen science

The EPA continued to work with partner organisations on several citizen science projects. The GLOBE Programme, which was implemented in partnership with An Taisce involved the measurement of nitrogen dioxide (NO<sub>2</sub>) at a number of locations around schools. In 2019, students and teachers from 51 schools around the country took part in this project. General findings indicated that air quality was mostly good, however, some schools did show a difference in the concentrations of NO<sub>2</sub> between play areas and the drop-off point at the front gate. This project was part of the European Environment Agency's pan-European citizen science project focusing on NO<sub>2</sub> measurements at schools: CleanAir@School (<https://epa-citizen-science.discomap.eea.europa.eu/>) in which eight European EPAs (Estonia, Ireland, Italy, Malta, Netherlands, Scotland, Slovakia, Spain) participated. This project will contribute to better understanding of local air quality issues and whether behaviour change can be prompted through participation in the project.

A pilot citizen science study targeting householders that have previously undertaken a three-month radon test, with test results above the reference level, was launched in November. This event was held during Science Week in partnership with Wexford County Council Library Service. Wexford householders were offered the opportunity to borrow a digital monitor from Bunclody library, in the same way as a book would be borrowed. Participating householders were quickly and easily able to confirm that the concentration of radon in their home remained above the reference level, where remediation work had not been carried out. Subsequently, many homeowners progressed to remediate their homes to reduce radon concentration.

During 2019, the EPA worked in partnership with the National Biodiversity Data Centre (NBDC) to scope and rollout the 'Dragonfly Ireland 2019–2024' survey with the object of producing an updated dragonfly and damselfly atlas for Ireland. The project examined the use of dragonflies and damselflies as bio-indicators of freshwater habitat quality. To date, almost 3,000 records of 26 species have been submitted by 400 citizen scientists.

The EPA also worked in partnership with the NBDC to develop the 'Explore Your Shore' survey with the objective of empowering and supporting volunteer citizen scientists to survey and record intertidal and coastal marine species. The records collected will help improve the knowledge of marine species distribution and explore their use as bio-indicators of water quality and climate change. A stakeholder workshop was held on Bull Island in June to mark the launch of the project and 152 individual recorders have submitted 868 records of marine and coastal species.

## Strategic Environmental Assessment

The EPA promotes sectoral engagement in Strategic Environmental Assessment (SEA) and the application of good SEA practice across all public authorities. The EPA reviewed and made submissions on key national and regional plans/programmes/strategies and associated SEAs. Significant plans related to the transport, tourism, marine planning and regional land-use planning sectors in relation to climate adaptation. A full list of EPA submissions is available at [www.epa.ie/pubs/epasub/](http://www.epa.ie/pubs/epasub/)

In 2019, the EPA published and disseminated three SEA guidance notes, with work on a fourth completed and due for publication in early 2020:

- ▲ Integrating Climatic Factors into Strategic Environmental Assessment in Ireland.
- ▲ SEA Good Practice Note for the Waste Sector
- ▲ SEA Good Practice Note for the Forestry Sector
- ▲ Cumulative Effects Assessment in SEA (due for publication in 2020)

The National SEA Forum met twice in 2019 to facilitate better information sharing and collaboration between SEA authorities. The Office of the Planning Regulator is now participating in the Forum. The EPA shares a 'live' listing of open SEA consultations with the SEA Forum members.

The second Review of SEA Effectiveness was completed in 2019 with the findings indicating that recent practice in Ireland is more procedurally effective than reported for the case studies in the first SEA effectiveness study of 2012. Overall, SEA is fulfilling its role and more governmental bodies and sectors have engaged in the SEA process. Furthermore, there is a greater openness to the process. A series of strategic



recommendations aimed at improving SEA effectiveness will be prioritised for delivery through the National SEA Forum in 2020 via a new SEA Action Plan.

The Environmental Sensitivity Mapping (ESM) WebTool was launched at the Environment Ireland 2019 conference. This novel GIS decision-support tool ([www.enviromap.ie](http://www.enviromap.ie)) allows planners to create plan-specific environmental sensitivity maps. Regional training events on the ESM tool have taken place already and several local authorities have already expressed their intention to use the tool as part of their upcoming development plan reviews.



Launch of Environmental Sensitivity Mapping Tool

## NIECE

The EPA continues its role in co-ordinating the activities of the Network for Ireland's Environmental Compliance and Enforcement (NIECE). The network provides a forum which encourages and supports organisations and individuals to work together to deliver improvements in priority environmental areas. Network membership, for the most part, includes local authorities, state agencies and government departments involved in the enforcement of environmental legislation, engagement and promotion.

In 2019, the Network assisted in the delivery of four large scale events:

- ▲ The National Water Event,
- ▲ The National Air Event,
- ▲ An event for local authorities on end of waste and by-products, and
- ▲ An Inspection Planning event for local authorities.

In addition, the Network facilitated the agreement and communication of the annual National Environmental Priorities for Local Authorities, to improve environmental enforcement planning and delivery. Training events, workshops, guidance and information sharing were facilitated through the various working groups and networks that operate within NIECE.

## Water Framework Directive

The EPA continues to provide technical leadership within the Water Framework Directive (WFD) governance structures through attendance at regional committee meetings and national working groups, and by providing technical support and advice to the Local Authority Waters Programme (LAWPRO). The EPA chairs the National Technical Implementation Group and three sub-groups on hydromorphology, natural water retention measures and local catchment assessments. The EPA commenced work on updating the assessments of pressures impacting on waters (characterisation) to inform the 3rd cycle draft river basin management plan, which is due to be published at the end of 2020. Engagement with external WFD stakeholders to incorporate local knowledge, and information on measures being implemented, will be a key part of the programme. The EPA supplied the water status element for the Significant Water Management Issues report (published at the end of 2019).

The EPA meets with the Northern Ireland Environment Agency (NIEA) to discuss and share information on WFD monitoring, classification and reporting including the status of cross-border water bodies and the use of rapid-assessment methods.

The EPA participates in the Department of Agriculture, Food and Marine's (DAFM) Common Agricultural Policy (CAP) Consultative Committee and the DAFM Nitrates expert group and continues to engage constructively with DAFM through these and other mechanisms. EPA's key message is that emissions to water from agriculture needs to reduce and that measures need to be integrated, ideally in a whole-farm planning approach, to meet water quality, biodiversity, climate, air and other environmental goals.

The EPA successfully hosted the United Kingdom and Ireland Lakes Network conference in Westport in September 2019 and produced a promotional video based on Lough Carra in County Mayo.

The EPA continues to champion and support research projects with participation on external projects such as the Freshwater Pearl Mussel project and Catchment-Care and on steering committees for EPA funded projects e.g. ESManage (decision tools related to ecosystem services) and MACROMAN (management of excessive seaweed blooms).

## Environmental Pillar

The Environmental Pillar comprises 26 national environmental non-governmental organisations, working together to represent the views of the Irish environmental sector. The EPA meets with the Irish Environmental Network (IEN) at least once a year. Two meetings were held in June and December 2019. These meetings provided a briefing and exchange

of perspectives on Irish environmental issues. The EPA also collaborated with the IEN to develop a map of community based environmental groups nationally.

## Ireland's National Action Plan for Antimicrobial Resistance 2017-2020

In October 2019, the EPA supported the Department of Agriculture and the Department of Health during an international in-country review of Ireland's National Action Plan for Antimicrobial Resistance (AMR). The review was undertaken by the European Centre for Disease Prevention and Control (ECDC) and the European Commission's Directorate-General for Health and Food Safety (DG-SANTE). While the focus of the visit was primarily to examine policies and practice within the human health and veterinary health sectors, the environment sector was also assessed, AMR is relevant to drinking water, surface water quality, waste management, effluent treatment, intensive agriculture regulation. The DHPLG gave a broad overview of progress and goals in various relevant areas to the Commission delegation. The report concluded overall that: *"In general, the commitment of actors, in all sectors and at all levels, to the control of AMR in Ireland is a positive example for other countries"*. The Commission team noted and commended that Ireland was the first Member State to have a separate day dedicated to environment-focused activities.

## Air quality

During 2019, the Air Quality Health Information working group, chaired and facilitated by the EPA, provided a forum to support the launch of two new iteratively improved versions of the EPA National air quality dashboard. This group includes stakeholders in environment and health, including the Health Service Executive (HSE) and enables discussion on air quality-related health topics.

## Nuclear safety

To allow the EPA to fulfil its responsibility in monitoring developments abroad in relation to nuclear installations and radiological safety and to advise the Government on the implications of such developments for Ireland, the EPA takes an active role in national and international committees on nuclear safety. In 2019, this included preparing a submission to the transboundary consultation on the proposed new nuclear power plant in Anglesey (Wales) and reviewing the UK's Environment Agency proposed changes to Sellafield's environmental permit.

## Heads of the European Radiological Protection Competent Authorities

The Heads of the European Radiological Protection Competent Authorities (HERCA) is an association of the radiation safety authorities in Europe and aims to facilitate practical and harmonised solutions on important regulatory issues in radiation protection. HERCA provides an important forum for

national authorities to share information and experience on the implementation of European legislation and international standards.

The EPA plays an active role in this work with representatives on the HERCA Board of Heads as well as the Working Groups on natural radioactivity, emergencies, medical applications, non-medical sources & practices and education & training. The EPA chairs the Working Group on natural radioactivity and during 2019 hosted a meeting of this Working Group in Dublin.

## European Nuclear Safety Regulators Group

The EPA represents Ireland on European and international forums on issues relating to nuclear safety. In particular, the EPA is actively involved in the European Nuclear Safety Regulators Group (ENSREG) and its work on nuclear safety, including legislation and initiatives to improve transparency arrangements. During 2019, this included a revision of the ENSREG Principles on Openness and Transparency, in line with findings from the survey of EU regulators' practices which the EPA led out on.

## Bilateral agreement with the UK on radiological and nuclear matters

The EPA meets regularly with the UK, including the Environment Agency and the Office for Nuclear Regulation, to discuss radiological and nuclear issues. In 2019, these discussions centred on the UK's nuclear safety arrangements following their departure from the EU, Sellafield, new nuclear build and international developments in nuclear and radiation safety and nuclear emergency planning. In addition, the EPA supports the DCCAE in the twice-yearly meetings of the UK-Ireland Contact Group on Radiological Matters. In 2019, the EPA participated in an exercise organised by the UK's Department of Business, Energy and Industrial Strategy to test practical arrangements to support the UK-Ireland bilateral agreement on early notification of a nuclear accident or incident of radiological significance.

## Convention on Nuclear Safety

The Convention on Nuclear Safety (CNS) is an international convention that obliges all signatory countries to maintain a high level of safety in nuclear power reactors, to maintain emergency planning arrangements and to report on measures taken in this respect. Every three years, all contracting parties to the CNS, including Ireland, must demonstrate compliance with the convention and undergo a peer review by other contracting parties.

As part of this process, the EPA assisted the DCCAE in preparing Ireland's 8th national report, which was submitted to the IAEA in 2019. EPA also reviewed and submitted questions on the national reports from other contracting parties.

## National Radon Control Strategy

The National Radon Control Strategy (NRCS) is a cross-government strategy that aims to reduce the incidence of radon-related lung cancer cases in Ireland. In May 2019, the National Radon Forum was held at which Phase 2 of the NRCS was launched along with a paper setting out the research required to implement the strategy. The priorities set out in the strategy are:

- ▲ Translating the high levels of awareness about radon into motivation to test and remediate.
- ▲ Supporting householders financially to carry out both testing and remediation.
- ▲ Increased government regulation: research has shown that financial supports must be combined with regulatory approaches and high-quality information to be effective.
- ▲ Passive Prevention Systems. The next revision of Technical Guidance Document C (which sets out the regulations relating to protecting new buildings from radon) provides an important opportunity to include the latest research on radon preventive measures. Passive prevention systems offer the potential to incorporate a sustainable and low-cost preventive measure in new builds.

Funding of research and undertaking collaborative work to address knowledge gaps in support of the National Radon Control Strategy, continued in 2019. The EPA continued funded research in NUI Galway to investigate the optimal radon preventive measures for the construction of homes in Ireland. Also, in NUI Galway, the EPA supported research focusing on radon concentrations in A-rated and deep energy retrofitted homes. The impact of building characteristics on radon was researched in cooperation with University College Dublin, while collaborative research with Queens University Belfast was carried out to assess the distribution of radon in homes.

European Radon Day was marked on 7 November, with press releases targeting the 12 counties that are known to have a particular radon problem. In addition, awareness was raised regarding the responsibility of employers to test for radon in High Radon Areas, as set out in the new Ionising Radiation Regulations, 2019.

## Non-ionising radiation

In May, the EPA was assigned statutory responsibilities for the public exposure to non-ionising radiation in the frequency range commonly referred to as Electromagnetic Fields (EMF).

Throughout 2019 the EPA engaged, through bilateral meetings, with stakeholders with a role or interest in EMF:

- ▲ Commission for Communications Regulation (ComReg)
- ▲ Health and Safety Authority (HSA)
- ▲ IBEC
- ▲ National Standards Authority of Ireland (NSAI)

- ▲ Department of Communications, Climate Action and Environment.
- ▲ Department of Rural and Community Development who provide support for Broadband Officers in their role within Local Authorities

The EPA also provided financial support to the World Health Organisation's EMF project and attended the annual project meeting with the aim of ensuring that advice provided by the EPA remains current and in line with international organisations.

## Emergency planning

Each year the EPA participates in radiation emergency exercises to maintain and develop staff expertise. In 2019, the EPA participated in eight international emergency exercises organised by the European Commission and the IAEA. The EPA hosted one of the international exercises, ConvEx-2g, the purpose of which is to test emergency public communications arrangements in IAEA Member States. This pilot exercise was the first time that the IAEA tested their social media simulator for effective communication in a nuclear emergency with a Member State.

The EPA continued to work with other organisations in Ireland to maintain and develop emergency preparedness and response capabilities for nuclear and radiological incidents. This work included training of Fire Officers, Defence Forces and Civil Defence personnel on responding to radiation emergencies. In November, Civil Defence volunteers attended training, coordinated by the EPA, to learn about the radioactivity measurement process prior to carrying out a nationwide exercise to take measurements of background gamma radiation and to collect environmental samples for analysis.

In 2019, the EPA continued to seek to increase its radioactivity measurement capacity in the aftermath of a nuclear emergency abroad. A tender for the provision of gamma detectors to screen food and environmental samples in the event of a nuclear emergency was awarded. These detectors will be used in EPA's regional offices to screen samples in a nuclear emergency.

The new National Plan for Nuclear and Radiological Exposures was approved by the Government in 2019. The EPA continues to have a major role in the plan which replaces the 2005 National Emergency Plan for Nuclear Accidents. The EPA were active participants in the Government Task Force on Emergency Planning and its subgroups and continued to support the IAEA by participating in expert missions and technical working groups to draft guidance. In 2019, the EPA was invited onto the Management Board of NERIS (European platform on preparedness for nuclear and radiological emergency response and recovery) and to vice-chair the HERCA Working Group on Emergencies.



## Providing timely and easily accessible information to all our stakeholders contributes to public participation in environmental decision making and gives people the information they need to make environmentally informed choices.

### 4.2 AWARENESS RAISING

#### Communicating key messages

The EPA's website is the principal communication tool for disseminating information to the public with over 1,160,000 sessions on the website during 2019. Peaks in activity during the year corresponded with media coverage of environmental issues and publication of reports. High volumes of traffic to the website were recorded in relation to retrieval of information on EPA-licensed sites; accessing information on licensing and enforcement; downloading EPA publications; careers in the EPA and accessing information on environmental thematic areas including climate change, air, water, waste, radon, etc.

#### Website development

Development of the EPA website in 2019 included:

- ▲ A new online portal for 'Greenhouse gas emissions' ([www.epa.ie/ghg](http://www.epa.ie/ghg)), bringing together both inventory and projections data in an integrated and accessible format.
- ▲ A register for Medium Combustion Plants ([www.epa.ie/mcp](http://www.epa.ie/mcp)), moving from a paper-based system to an online system.
- ▲ Dedicated webpages setting out the EPA's role and information on Electromagnetic Fields (EMF) ([www.epa.ie/radiation/emf/](http://www.epa.ie/radiation/emf/)), following EPA's new statutory responsibilities for the public exposure to non-ionising radiation in the frequency range commonly referred to as electromagnetic fields.
- ▲ Redevelopment of the map interface on the national air quality dashboard ([www.epa.ie/air/quality](http://www.epa.ie/air/quality))

#### Media relations

The EPA provides a 24-hour service to the media and during 2019 handled 715 media queries and issued 42 press releases. Environmental news stories featured in over 19,000 newspaper articles throughout the year.

#### Social media

Throughout 2019 the EPA continued to expand its use of social media in a progressive and structured fashion to disseminate environmental messages to a wider audience. Social media platforms have proved a successful platform for the EPA to reach people quickly and directly with environmental messages and also drive traffic to our website for further information.

By the end of the year, the EPA had 40,400 followers on Twitter catering for specific interests including climate news, research news, air quality, ecology, bathing water information, radon, waste and water resources. During 2019, EPA videos on YouTube received over 437,325 views. On LinkedIn, the EPA and EPA Research pages have more than 13,500 followers combined.

#### Outreach activities

The EPA has continued to play an important role in raising levels of awareness and supporting initiatives that increase public engagement with environmental issues.

Science week encourages people of all ages and from all walks of life to be informed, inspired and involved in STEM events and the EPA participated in a variety of events in 2019 including environmental talks, piloting a radon monitoring scheme and hosting information stands at several local authority events.

During 2019, the EPA worked in partnership with several organisations on a variety of citizen science projects supporting the priorities of clean water and air and sustainable behaviour. The GLOBE citizen science programme continued in partnership with An Taisce. In addition, other programmes included: The Dragonfly Ireland 2019-2024 survey; Explore Your Shore; Seashore Spotter; The Big Beach Biodiversity Survey and Lake Monitoring with Anglers in the Border Region.

As part of the EPA's corporate sponsorship commitments, local initiatives were supported that raise awareness about environmental issues or the work of the EPA. In 2019 the EPA supported the EcoUnesco Young Environmentalist Awards and the greening of the Wexford Opera Festival, together with several other local initiatives that promoted environmental learning and activities.

For the third year running, the Story of Your Stuff was launched in January 2019 and received over 140 entries from 60 schools across the country. The Story of Your Stuff competition raises awareness among second-level students nationwide of: the finite nature of resources; the benefits of recycling and reuse; and the life cycle of objects and the transformations that objects go through along the way.



The winning students told their story on toothbrushes which can be found on the EPA YouTube channel: <https://youtu.be/plj6qBUbpSA?list=PLFesobjWT1FhCfm97WaWeJKErEu7dVhjc>



Pictured Left to right - Professor Emma Teeling, Deputy Director, UCD Earth Institute, Dr Jonathan Derham, EPA, Tomi Ayibiowu, Aldiana Hoxha, Kar Gong Leong and Shurooq Azam (Hansfield Educate Together Secondary School, 2019 Winners), Dr Tara Shine, and Colette Ryan, EPA

### Television broadcast

The EPA again provided support funding for Eco Eye, and the 17th series was broadcast on RTÉ One early in the year. Viewing figures averaged almost 478,000 viewers per programme. This series continues to raise environmental awareness and provides the public with comprehensive information about environmental issues across climate change, waste, biodiversity and water quality.

The EPA supported the air quality episode in the “10 Things to Know About” TV series, which promotes Irish research. The episode featured interviews with Irish scientists including those from the EPA working to tackle air quality issues. The EPA scientists discussed the public health impacts of traffic emissions and burning fossil fuels in our homes, highlighting the problems with nitrogen dioxide, particulate matter and other common air pollutants.

Together with Bord Bia the EPA co-sponsored Grow Cook Eat, a television series promoting food growing which included food waste messaging throughout the programme. This action brought the Stop Food Waste brand to a total audience of 2,935,000 over seven episodes.

### Environmental queries

The EPA provides an Environmental Queries Service to our stakeholders including the public, students, local authorities and government departments. The service operates in accordance with the commitments of the EPA Customer Charter and, in 2019, responded to over 2,411 queries of this nature. Subjects of particular interest to the public included issues relating to domestic waste water treatment systems (septic tanks), radon, noise pollution, ambient air quality, drinking water quality (private wells and public water supplies) and local authority issues including backyard burning and illegal dumping.

### Conferences and exhibitions

The EPA supported 78 public engagement events during 2019. Key national and local events included the BT Young Scientist & Technology Exhibition (where the EPA also presented a Special Environmental Award), the National Ploughing Championships and regional Science Festivals. These events provided an ideal opportunity to raise awareness of, and engage the public's support in, environmental issues.

Outlined below are highlighted conferences and events held during 2019.

#### EPA National Climate Conference

The inaugural national climate conference: ‘Ireland as a leader in climate change’ was organised in collaboration with the DCCAE and took place on 15 May 2019. The conference supports the National Dialogue on Climate Action, a Government of Ireland initiative, and provided a forum for information exchange, networking, debate and learning. The conference presentations are available on the EPA YouTube channel: [www.youtube.com/watch?v=vrDsFxBUFso&list=PLFesobjWT1Fg3wROOf8aYnX942ywtSMey](https://www.youtube.com/watch?v=vrDsFxBUFso&list=PLFesobjWT1Fg3wROOf8aYnX942ywtSMey)

## Climate Change Lecture Series

Two lectures were held during 2019 in the historic Round Room of the Mansion House in Dublin and chaired by Dr John Bowman.

The first, held on 17 May invited speaker Dr Edward Cameron, a climate justice advocate, to present a lecture entitled 'New Climate Leadership' about the need for leadership to ensure a low carbon, climate resilient future for our planet. Over 200 people attended the event which was simultaneously broadcast on the EPA website. A recording of the lecture received over 1.7K views on the EPA YouTube channel: [https://www.youtube.com/watch?v=y\\_Wi5GGKWi4](https://www.youtube.com/watch?v=y_Wi5GGKWi4)



Dr Edward Cameron

The second lecture, held on 20 October invited speaker Dame Prof. Julia Slingo, former Chief Scientist at the UK Met Office, to present a lecture entitled 'Facing up to Climate Change: Where next for Climate Science' about the general acknowledgment of the existence of climate change and where to go to from there. Over 250 people attended the event which was simultaneously broadcast on the EPA website. A recording of the lecture received over 700 views on the EPA YouTube channel: <https://www.youtube.com/watch?v=h3glSBITbXs>



Dame Professor Julia Slingo

## National Water Event

In May, the National Water Event 2019 titled "From Knowledge to Action: Improving Water Quality" was held in Galway. The event was a forum for local authorities, regulators

and water professionals to learn about current changes in Ireland's water policy and practices. The event was well attended with over 350 delegates attending over two days.

## National Air Event

"Working Together Towards Clean Air", the National Air Event, was held in October in Kilkenny. The event was a forum for providing and sharing of practical information on air quality and enforcement. It was attended by 150 representatives from the EPA, HSE, local authorities, industry, consultants and third-level research groups.

## Environment Ireland Conference

In October, the annual Environment Ireland conference, organised in association with the DCCAE, included presentations on environmental policy, health, air quality, water quality, climate change, planning and resource efficiency and the circular economy.

## Environment Health and Wellbeing Conference

In November in Dublin, the EPA co-hosted with the HSE and Economic and Social Research Institute (ESRI) the fourth conference in the series about environment health and wellbeing. The conference was attended by 160 delegates from the HSE, ESRI and EPA and others working in the health, wellbeing and citizen engagement area, along with representatives of non-governmental organisations and academics. Presentations and video recordings from the conference are available on the EPA YouTube channel: <https://www.youtube.com/playlist?list=PLFesobjWT1FggYNPoAnE2lqLvXQ1osEZ4>

## Education

The EPA sponsored a lesson on ozone and ozone-depleting substances in Science and Technology in Action, a multimedia resource for second-level schools.

In 2019, the EPA continued to promote its education materials and other online resources through targeted placement of articles in environmental and educational magazines and through outreach initiatives.

## Junior Achievement Ireland programme

The EPA continued its partnership with Junior Achievement Ireland (JAI) in 2019, with 29 staff from all EPA offices delivering programmes to 796 students in 19 primary and second-level schools across eight counties. During Science Week 2019, 16 volunteers facilitated EPA Workshops on climate change in 12 schools, reaching a further 522 students.

The aim of JAI is to encourage students to stay in school and to maximise the opportunities that their education provides through delivering programmes featuring enterprise education, STEM (science, technology, engineering and mathematics) skills along with business and life skills.



**We strive to influence positive behavioural change by supporting businesses, communities and householders to be more resource efficient.**

### 4.3 PROMOTING SUSTAINABLE BEHAVIOUR

#### National Waste Prevention Programme

The National Waste Prevention Programme's (NWPP) vision is to deliver national-level, strategic programmes to prevent waste and drive the circular economy in Ireland. Following a Programme review in 2018 the EPA launched its reframed programme in 2019 providing supports and information to businesses, individuals and the public sector to influence behavioural change, support sustainable choices and inform policy. Priority areas are food, plastics, agriculture, construction & demolition, local waste prevention and resources & raw materials. The Programme delivers through the platforms of innovation and demonstration projects, partnerships and advocacy and communications.



#### Waste Prevention

Exploring approaches to reducing plastics waste was a key focus area for the NWPP in 2019 and saw the NWPP engage with the Irish Universities Association on the potential for a partnership project to demonstrate plastic waste prevention and behaviour change on Ireland's university campuses which host a student population of 120,000 along with over 15,000 staff. The EPA also commenced working with the Enterprise Ireland on their Small Business Innovation Research programme to address the unsustainable amounts of plastic packaging used in Ireland, with a focus on difficult to recycle plastics such as soft plastic films and wrappers.

The Local Authority Prevention Network (LAPN) continued to provide technical assistance and funding for the promotion of resource efficiency and waste prevention at a local level. Grants and supports were provided across 24 local authorities to carry out 58 projects including: training local authority architects and quantity surveyors on designing out construction waste; greening the Irish Open golf tournament and installation of public drinking water fountains along the Waterford Greenway to prevent single-use plastic bottle usage.

The Smart Farming programme, run by the Irish Farmers' Association in partnership with the EPA, was selected as a Sustainable Development Goals champion for 2019/20,

to raise awareness of the goals in the farming sector. Fifty on-farm resource efficiency assessments were completed by Smart Farming with average cost savings of €6,300 and a 10 per cent average reduction in greenhouse gas emissions identified on participating farms. The programme also won the inaugural Royal Dublin Society Talamh Agri-Innovation Award recognising the merit of the programme and its strong results.

The strategic partnership with the Rediscovery Centre, Ireland's National Centre for the Circular Economy, provided for outreach by the centre as well as an extensive educational programme and workshop/camp schedule. These activities attracted 7,500 visitors; while a further 10,000 people were engaged through the centre's sustainability education programme. The Circular Economy Academy was launched – a mentoring programme for social enterprise and community organisations – and had nine members signed-up by year end. The Conversations on a Circular Economy series commenced with seminars on textiles and construction & demolition and webinars were held on European Circular Economy Action Plans.

Late in 2019, the NWPP entered a three-year strategic partnership with Irish Manufacturing Research to establish CIRCULÉIRE, the National Platform for Circular Manufacturing. This is a landmark public-private partnership which will deliver

at-scale for the circular economy. It is targeting a 20 per cent reduction in greenhouse gas emissions and waste production in Irish major manufacturing companies.

The NWPP directly invested in innovation for a circular economy through its Green Enterprise programme. Four new projects were grant awarded in 2019 to work on new waste prevention solutions for food, plastics and textiles. Seven older projects were completed during 2019 and published toolkits, case studies and guidance for the circular economy.

The EPA also supported the DCCAE in its Green Government initiative, through the publication of a handbook on resource efficiency planning for government departments, and through the NWPP online tool for Resource Efficiency (TREE).

The EPA chaired a working group on Construction & Demolition Waste Prevention and Best Practice and the Circular Economy. The group agreed policy recommendations to reduce construction & demolition waste for implementation in 2020 and beyond. A repository of best-practice guidance and policy documents for the sector was also published: [www.epa.ie/waste/nwpp/canddl](http://www.epa.ie/waste/nwpp/canddl).

In partnership with the Waste Management Planning Regions, the EPA sponsored the Upcycle Challenge. This competition was run as part of the national Reuse Month initiative and attracted 230 entries working on projects to upcycle cast-off items for new uses such as outdoor furniture and clothing.

The NWPP funds the operation of the Community Reuse Network Ireland, the umbrella organisation supporting reuse and repair organisations in Ireland, which are core circular economy activities. In 2019, its 25 members reused over 23,000 tonnes of materials (generating an estimated 220,000 tonnes carbon savings), employed 670 people and provided 1,600 training posts to support circular economy.

The NWPP supported two circular economy platforms; FreeTrade Ireland and Repairmystuff.ie. On FreeTrade Ireland the public can offer unwanted items for reuse free of charge; 8,300 exchanges were completed in 2019. [www.repairmystuff.ie](http://www.repairmystuff.ie) is the national online repair directory and during 2019 over 800 repair business engaged with 8,000 monthly visitors.

## Stop Food Waste

In 2019, activities on food waste prevention continued though the national food waste prevention campaign for householders, StopFoodWaste.ie.

Through a strategic plan via social media to increase Stop Food Waste consumer audiences, a new Instagram channel was launched to reach younger age groups and national campaigns developed to drive traffic to the [www.StopFoodWaste.ie](http://www.StopFoodWaste.ie) website. These initiatives resulted in a 57per cent increase in

social media followers to over 23,000 in 2019. Traffic to the StopFoodWaste.ie website rose by 25 per cent with an average of 12,000 monthly visits.

Stop Food Waste week took place in June and over 200 businesses signed up to receive information and resources to disseminate in their workplaces and help people reduce food waste at home and at work. The EPA also launched a pilot training programme on reducing food waste in the home delivered to staff in their workplaces.

The EPA produced an educational resource pack to support over 20,000 Junior Cycle students to learn about reducing food waste through the Home Economics curriculum.

To highlight the link between food waste and climate change – reducing food waste is an everyday climate action that people can take – the EPA ran a two-week national communications campaign in November, reaching over 2.6 million people during the campaign, including over 530,000 people engaged through social media messaging.



The EPA continued to engage directly with the public at two key national events, Bloom and the National Ploughing Championships, with over 400,000 attendees, and regionally with 47 public talks, workshops and events. Nearly 400 people were trained on food waste reduction through workplace and community-based Stop Food Waste Challenges.

In July, 100 industry stakeholders and policy makers attended the third EPA Forum on Food Waste, to review food waste in Ireland and discuss future prevention actions. The event also launched the results from an EPA-funded study on food waste in food services and retail businesses, identifying that 250,000 tonnes of food waste are generated annually by this sector.



The research found that much of this waste is avoidable and estimated the value of food waste for the Irish hospitality sector alone at over €300M.

The EPA continued to promote the Food Waste Charter. New resources and guidance for measuring food waste in the hospitality sector were developed. Through the Retail Action Group, the EPA continued to engage on food waste with five grocery retailers who signed the Charter, focused on improved reporting; taking action to reduce food waste; and engaging their customer base.

The EPA also participated in the EU Platform on Food Losses & Waste and provided input to the key output: 'Recommendations for Food Waste prevention'.

### Hazardous waste prevention and management

Over the course of 2019, EPA progressed several actions on hazardous waste prevention and management in line with the actions set-out in the National Hazardous Waste Management Plan (NHWMP).

The Disposal of Unused Medicines Properly (DUMP) campaign is run by the Health Service Executive (HSE) with support from local authorities. The campaign encourages and facilitates the public to return surplus and expired medicines to participating pharmacies for safe disposal. In 2019, the EPA analysed the waste collected from a cycle of the campaign in Cork and Kerry involving 250 pharmacies, that collected four tonnes of medical waste over six weeks. The study found 60 per cent of the waste comprised powders; loose tablets; and tablets in blister packs. The remaining waste types included creams & gels; liquids & syrups; and devices such as epi-pens & inhalers.

It is estimated that 29 tonnes of unused medicines require safe disposal every year in Ireland, and this study will inform the development of a national solution to this issue.

The EPA conducted a study to determine the level of hazardousness of waste domestic paint products and decorative coatings. The study examined 92 paint and varnish products and produced a database with information regarding the hazardousness of products investigated. Many water-based paint products have been classified by the manufacturer as non-hazardous, and almost all solvent-based paint products have been classified by the manufacturer as hazardous. Based on the waste code assigned by the manufacturers, a significant portion of domestic paint waste can be considered as a non-hazardous waste. This study also found that information on the disposal of packaging for these products was absent or limited.

Under the NHWMP, one of the goals is to estimate the quantities of hazardous wastes associated with agriculture. Sheep-dip is widely used in Ireland and can have serious impacts on human health and aquatic life if disposed of improperly. The EPA commenced a study to estimate the quantities of sheep dip used in Ireland each year, and to develop suitable regulations and guidance for the management of spent sheep dip.

The EPA continues to be the national lead on the NHWMP and to advocate for operational and policy changes to ensure hazardous waste management conforms to practice, including a focus on prevention actions. The current plan will end in 2020, and the process of preparing a revised plan for the period 2021 to 2028 will commence during 2020.







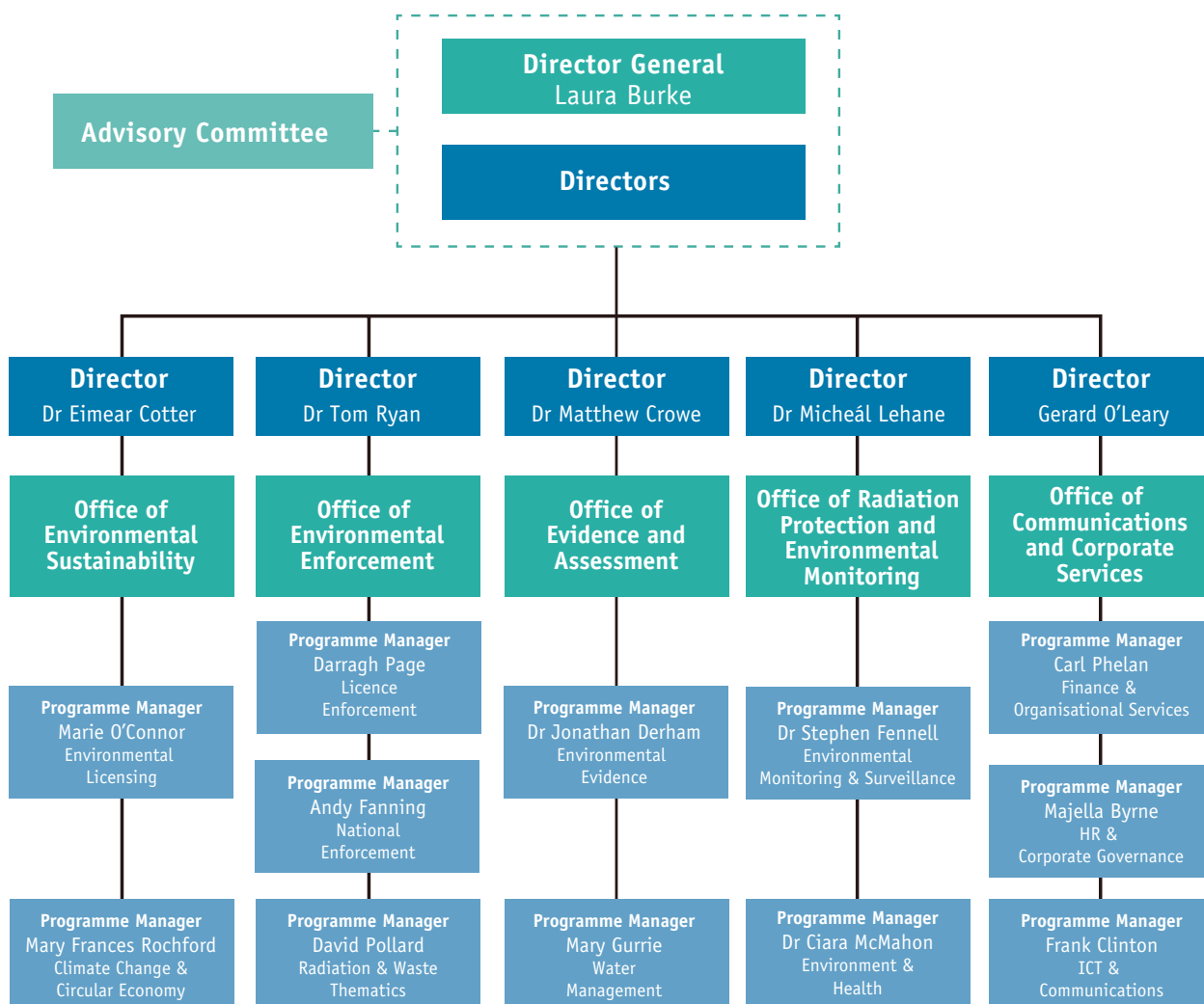
A dramatic landscape photograph of a mountain valley. In the foreground, a stream flows over dark, wet rocks. A large, mossy rock sits prominently on the left bank. The middle ground is a grassy slope with patches of green and yellow. In the background, dark, rugged mountains rise under a heavy, grey sky with some light breaking through. A large white number '5' is overlaid on the right side of the image.

# 5

**“ We will develop our staff and align our organisation to deliver best environmental outcomes by focusing on the development and promotion of organisational health, wellbeing and safety at work and promoting a culture of leadership, reform and innovation.”**

## 5. ORGANISATIONALLY EXCELLENT

### 5.1 ORGANISATION STRUCTURE





## EPA Board of Directors



Pictured (left to right): Dr Matthew Crowe (Director, Office of Evidence and Assessment), Dr Micheál Lehane (Director, Office of Radiation Protection and Environmental Monitoring), Dr Eimear Cotter (Director, Office of Environmental Sustainability), Ms Laura Burke (Director General), Mr Gerard O'Leary (Director, Office of Communications and Corporate Services) and Dr Tom Ryan (Director, Office of Environmental Enforcement)

### Board Meetings

The EPA Board comprises six full-time Executive Directors. A total of 53 board meetings were held in 2019: 15 general meetings, at which corporate policy, governance, strategy, finance and planning issues were dealt with, and 38 technical meetings, at which licence applications, prosecutions and operational issues were dealt with.

### EPA Advisory Committee

The Executive Board of the EPA is assisted by an Advisory Committee of 12 members nominated by prescribed organisations and appointed by the Minister for Communications, Climate Action and Environment. Two new members were appointed to the Committee in July 2019 to replace the members who resigned in 2018. The Director General of the EPA is, ex officio, a member and Chairperson of the Committee. The term of office of the Committee is three years.

The Advisory Committee has a wide range of advisory functions under the EPA Act 1992, as amended, including making recommendations to the EPA, or the Minister, relating to the functions of the EPA.



Pictured (left to right): Mr Sean Finan, Mr Sean Finlay, Ms Aebhin Cawley, Dr Cara Austenborg, Minister for Communications, Climate Action and Environment Richard Bruton, TD, Dr Rónán Kennedy, Ms Laura Burke, Ms Elaine Nevin and Dr Ina Kelly. Absent from the photograph are Dr Áine Ryall, Ms Colette Byrne, Mr Harold Kingston and Dr Laure Marignol.

### Appointees from prescribed bodies

Ms Collette Byrne (nominated by the County and City Managers Association)

Dr Ina Kelly (nominated by the Directors of Public Health of the Health Service Executive)

Dr Cara Augustenborg (nominated by the Irish Environmental Network)

Dr Rónán Kennedy (nominated by the Irish Environmental Law Association)

Mr Harold Kingston (nominated by the Irish Farmers' Association)

Ms Elaine Nevin (nominated by the National Youth Council of Ireland)

Dr Laure Marignol (nominated by Trinity College Dublin) appointed on 1 July 2019

### Ministerial appointees

Dr Áine Ryall

Mr Sean Finlay

Ms Aebhin Cawley appointed on 1 July 2019

Mr Sean Finan

### Chairperson

Ms Laura Burke, Director General, EPA

### Meetings

The term of office of the 7th EPA Advisory Committee commenced in December 2016 and ended in December 2019. During 2019, there were three meetings convened at various EPA and off-site locations.

The report of the Advisory Committee to the Minister for Communications, Climate Action and Environment recorded the main issues considered by the committee during its term of office. It set out a series of recommendations to the EPA, and to the Minister, relating to the EPA's functions. These recommendations cover a range of key issues including: specific recommendations made to the EPA on the areas of Communications Strategy, EPA Website, and Access to Information and Open Data. Recommendations made to the Minister concerned Resources, Budgetary Matters, Climate Action, Waste Management, Air Quality, and Access to Information and Open Data; and, recommendations that may be of assistance to the work of the incoming Advisory Committee.

The report is available on the EPA Website: <http://www.epa.ie/about/org/lac/>.

### Other Advisory Committees

#### Dumping at Sea Advisory Committee

The term of office the Dumping at Sea Advisory committee ran for the period October 2016 to October 2019. One meeting was held in 2019 and further interactions between the EPA and the committee were conducted over the period via electronic communications. The committee was consulted on all permit applications and contributed to new application guidance for permit applicants. The guidance considered the publication 'Addendum to 2006 Guidelines for the Assessment of Dredged material in Irish Waters' (Marine Institute, 2019) detailing revised lower action levels for arsenic and nickel for classification of dredge materials. The committee also

discussed Dublin Bay monitoring, licensing of loading/dumping vessels as passenger boats and the ongoing Interreg project on beneficial re-use of sediments.

### Genetically Modified Organisms Advisory Committee

One meeting of the Genetically Modified Organisms Advisory Committee (GMO AC) was held during 2019. This was the second meeting of the 8th GMO Advisory Committee (2017–2020) at which the European Court of Justice decision on new mutagenesis techniques (NMTs) was discussed. The purpose of this discussion was to gather information about the impact of the decision on a range of sectors.

In addition, the GMO Advisory Committee was notified in relation to five notifications from the European Medicines Agency (EMA) in respect of marketing authorisations for human medicinal products comprising GMOs. The GMO Advisory Committee's comments were noted in the Inspector's Report to the Director.

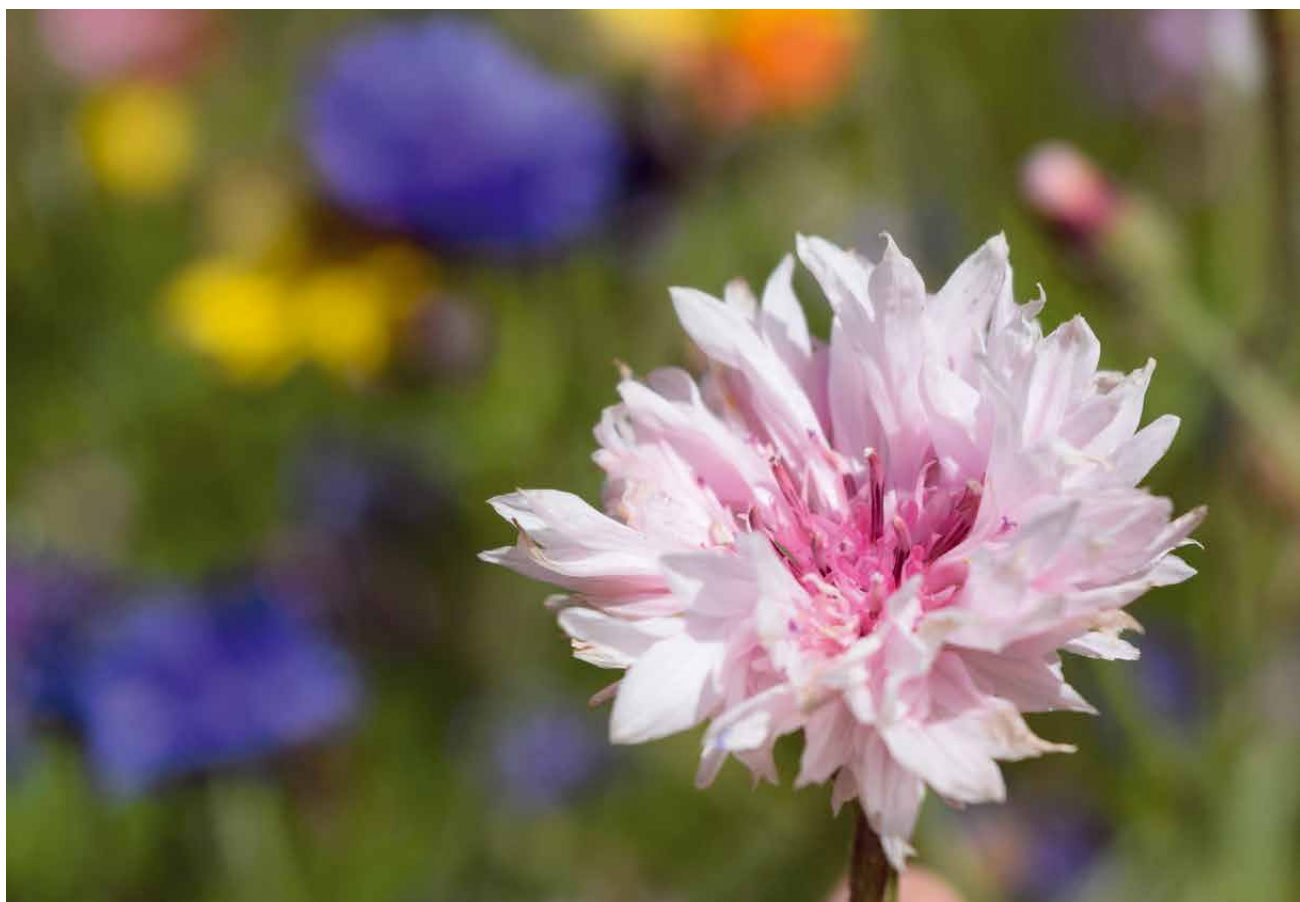
### Health Advisory Committee

The Health Advisory Committee was formed in 2011 and its purpose is to assist and advise the EPA in relation to the public health implications of matters pertaining to environmental protection. The committee comprises representatives from public bodies working on environment and health issues,

including the Health Service Executive (HSE), the Health and Safety Authority (HSA), the Health Research Board (HRB), the Department of Communications Climate Action and Environment (DCCAE), the Department of Agriculture Food and the Marine, the Department of Health, An Bord Pleanála, the Food Safety Authority of Ireland, the Health Products Regulatory Authority, Department of Housing Planning and Local Government (DHPLG) and the County and the City Managers Association (CCMA). The committee met once during 2019 and topics examined included the national radon control strategy, radon research gaps, environment and health in the State of the Environment Report 2020 and an update on environment and health research.

### Radiological Protection Advisory Committee

In 2019, a new Radiological Protection Advisory Committee was established for a three-year term of office. The Committee is made up of sixteen members nominated by organisations with expertise relevant to the radiological protection functions of the EPA. The committee met twice and discussed the new radiation protection regulatory framework, the EPA's role in nuclear safety advice and emergency preparedness, the National Radon Control Strategy, radon risk communication and a proposed national survey of the public's concerns about radiation.





## 5.2 HUMAN RESOURCES

The ambition of the EPA's Human Resource Development (HRD) Strategy (2017-2020) is to become a role model for the stewardship and development of our people and organisational resources.

To support the HRD Strategy four strategic goals and actions have been identified where the EPA is committed to fostering a healthy, engaged and resilient workforce; developing our people and organisational resources; empowering our managers as experts and leaders and evolving our HR delivery model.

During 2019, significant progress was made in implementing priority actions of the HRD Strategy in the following areas:

- ▲ Revision of the Competency Framework and Recruitment Process.
- ▲ Development of the Management and Leadership Network of middle managers.

- ▲ Improvement of the Team Development Initiative to help support the development of teams.
- ▲ Review of HR Business Partnering.
- ▲ Ongoing improvement of HRD business processes.

### Recruitment

The EPA is recognised as an employer of choice in the public sector and continues to attract a high level of interest in posts advertised. During 2019, the EPA advertised 20 open recruitment competitions and received almost 1,000 applications. The Competency Framework and Recruitment Process was revised to focus on continuing to attract and retain staff with the necessary skills and expertise.

The EPA received sanction for an additional nine posts during 2019 bringing the approved staff complement at the end of the year to 420. Approximately 170 staff are based in Headquarters, Wexford with the remainder located in five Regional Inspectorates and two Hydrometric Offices throughout the country.



EPA staff at Agency Day, 2019

### Placements

The EPA continued to engage with a wide range of third-level educational institutions under an Internship programme so that students have an opportunity to work in the EPA and gain experience and expertise. Seven paid internships were offered and filled during 2019.

The summer student placement programme continued in 2019, where 27 third-level students had an opportunity to put the theory and skills they have learned during their coursework into practice across the EPA business functions, bringing fresh insights and adding value to the work of the EPA.

### Skills and capabilities

In line with the HRD Strategy, the EPA offers an extensive range of training supports to all staff to improve the depth of skills and knowledge across the organisation and to support the delivery of the EPA's mandate and strategic goals. This commitment is reflected in an expenditure for learning and development that represents approximately three per cent of payroll spend. During 2019, staff participated in many events, including training courses, workshops, conferences

and seminars, which the EPA sees as a significant forum for informal learning. This amounted to a total of over 2,735 training days – an average of 6.4 days training per person.

### Strong leadership

Several initiatives are available to leaders in the EPA, including the continued roll-out of an Essential Skills of Management and Leadership programme. The programme was initially designed to provide management training to anyone moving from a position of non-people manager to people manager. It has since evolved to a wider audience, namely managers at all levels who wish to refresh and refocus their leadership capabilities.

The programme incorporates and reflects the core values of the EPA and has a focus on active learning. This equips managers in the EPA with the knowledge, skills and behaviours to effectively deliver their work programme and ultimately the EPA strategy.

The Management and Leadership Network was established in 2019, creating a network of effective middle managers and a positive leadership approach across the organisation through building a community of practice and peer learning.

The Team Development Initiative has been designed to support teams and build capabilities in the EPA. The programme was reviewed in 2019, and several changes will be incorporated into a Team Coaching approach going forward.

### Partnership

The EPA's Partnership Committee, Meitheal, has been in place since 1999. During 2019, Meitheal continued to play a role in staff consultation in relation to the implementation of the EPA Strategic Plan, the HRD Strategy and the development and promotion of the Green Team initiatives. Meitheal continued to support EPA involvement in Junior Achievement Ireland and other outreach initiatives and led on EPA's participation in Workplace Wellbeing Day.



### Workplace wellbeing at the EPA

In 2019, the EPA carried out a review of the supports available in relation to Health and Wellbeing under the HRD Strategy. The EPA, in conjunction with Cornmarket, launched the Pink and Blue Power campaign. The campaign is a potential life-saving breast and prostate health assessment and education programme for employees. In addition, the EPA rolled out its Misuse of Intoxicants Policy including an awareness session for employees in relation to alcohol and drug awareness. Furthermore, the EPA applied for accreditation under IBEC's KeepWell Mark and this will be assessed in February 2020.

### Safety, health and welfare at work

The EPA recognises that safety, health and welfare are essential requirements of its operations. In this regard, it is EPA policy to conduct its business in a manner that protects the safety, health and welfare of staff, visitors, contractors and members of the public who may be involved in or with EPA activities. The EPA provides, insofar as is reasonably practicable, a safe place of work and a safe system of work for its staff in accordance with the Safety, Health and Welfare at Work Act, 2005 and associated regulations. This commitment has been strengthened by a new safety management system and implementation of this system was completed in 2019.

## 5.3 INFORMATION COMMUNICATIONS TECHNOLOGY

The EPA's corporate strategy sets out the ambition to enhance capacity and use of Information and Communications Technology (ICT) to support reform and innovation. A Board subcommittee oversees the governance and strategic direction of ICT-enabled change. The key priorities for ICT investment are in such areas as information provision, data management, online and shared services, leading-edge technologies and building internal ICT capabilities.

### Information security

Information is a key asset of the EPA. The protection of the EPA's information, technologies and applications is critical to performing EPA functions effectively. Information security practices in the EPA encompass three main elements: confidentiality, integrity and availability. Accordingly, the EPA has introduced policies and technologies in the last few years to meet the growing demands in the information security space, and these are periodically reviewed.

Information security audits on Remote Access, ICT Administrator access, and access to the EPA Microsoft Azure Cloud were undertaken in 2019, and recommendations have been implemented. A scoping paper was prepared for an internal audit of Information Security of EPA business including Cyber Security with the audit scheduled for 2020.

Information security training was provided for all staff and was complemented with a digital awareness campaign towards the end of 2019. The ICT policies were reviewed by the Information Security Officer and user-friendly videos prepared on the key policies.

### New ICT systems and technologies

Information and communications technologies are constantly changing and improving. The EPA endeavours to keep up-to-date with best practice in ICT; to ensure that the best technical options are selected, to maximise use of new technology, and to ensure value for money in ICT investments.

Significant work was completed in 2019 to replace outdated communication technologies used by EPA staff and contractors. Several older systems, used for phone calls, video-conferencing and instant messaging have been replaced with better, less expensive, faster and more integrated communications systems. Better video-conferencing tools allow EPA teams to work together more effectively and reduce travel between offices.

To meet business needs for improved tools to carry out EPA environmental and managerial roles, new and more powerful ICT tools and systems are required. New ICT products and applications are provided to EPA teams where the need identified aligns with the EPA Corporate Strategy, where a clear business case exists and where available budget allows..



## 5.4 ENVIRONMENTAL MANAGEMENT SYSTEM

The EPA are committed to leading by example and incorporate good environmental management and practice into our everyday activities. The EPA maintains an Environmental Management System (EMS), certified to the international standard ISO14001:2017 and have done so since March 2010. Using this standard, the EPA strive to continually improve on its environmental impact and in doing so prevent pollution and encourage environmental awareness.

### Energy overview

The EPA has achieved significant success in relation to achieving the public sector energy efficiency savings as set out in the National Energy Efficiency Action Plan, reducing energy demand by over 50 per cent since 2006. The EPA has had considerable success, ahead of the deadline, of surpassing the Government's 2020 energy efficiency target of 33 per cent reduction in energy demand. Monitoring of energy consumption across all sites has been critical in achieving success to date.

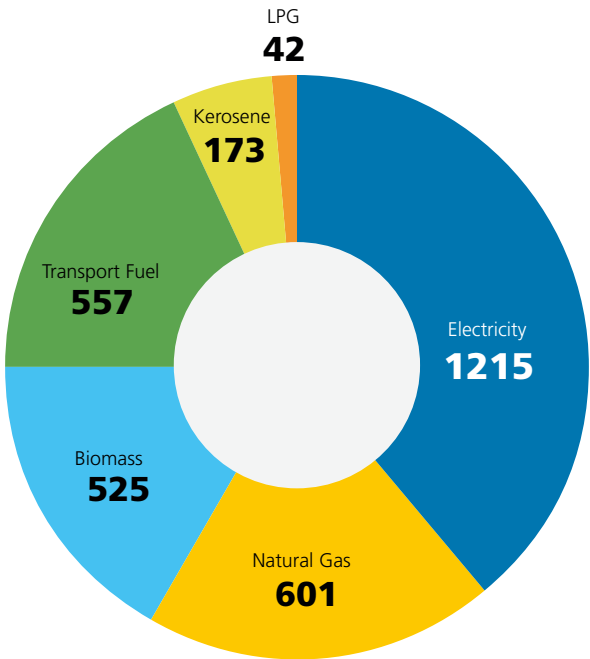
The EPA has appointed a Site Environmental Manager (SEM) at each of its locations. The SEM actively manages and controls energy usage through a Building Management System (BMS). Furthermore, the Office of Public Works' Energy Management System is utilised in each location to provide energy usage data. Significant effort and capital investment have been made in recent years to reduce energy consumption and to use renewable energy sources where possible, such as the move to Bio-LPG in EPA headquarters and the use of electric heat pumps in Dublin. Two LED lighting upgrade pilot projects were carried out in Monaghan and Castlebar in 2019, resulting in a lighting energy reduction of 78 per cent. The results of these pilots will inform future upgrades in larger EPA buildings. As

part of EPA's commitment to use lower emission vehicles, the EPA procured two electric vehicles to replace two diesel powered vehicles and installed Electric Vehicle charging infrastructure in all EPA locations.

### Energy usage

Most of the energy consumption at EPA offices and laboratories is related to space heating, lighting, power, hot water and transport fuel. In 2019, the EPA's total energy consumption (Figure 11) amounted to 3,113 megawatt hours (MW h) showing a decrease of 68 MWh from 2018.

**Figure 11.** EPA energy usage (MWh)



## 5.5 GOVERNANCE

### Corporate governance

Corporate governance is vitally important for the EPA in effectively discharging its statutory remit. It ensures a framework of structures and processes are in place to allow Board members to objectively and effectively assess management and corporate performance while ensuring members also meet their own governance responsibilities. It is the policy of the EPA to comply fully with governance and accountability obligations and to follow best practice in so doing.

The Code of Practice for the Governance of State Bodies 2016 (the Code) is mandatory for all State bodies and came into effect on 1 September 2016. During 2019, the EPA continued to implement governance requirements and maintained compliance with the Code. A Corporate Governance Unit is in place with responsibility for overseeing and reporting on the implementation of and compliance with the Code.

### Risk management

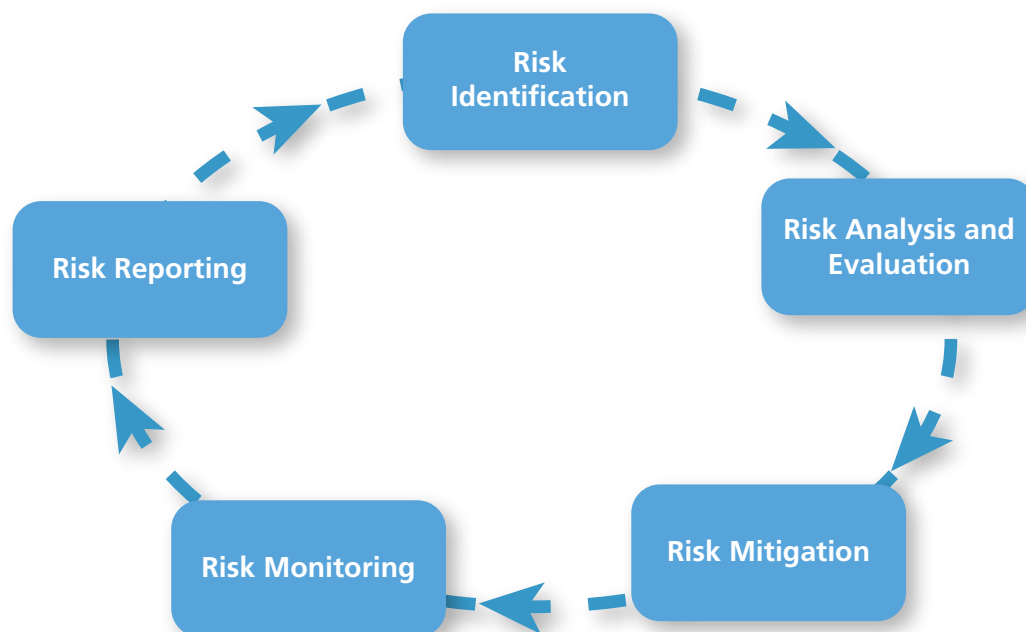
The EPA is committed to managing its risks and has a risk management framework in place which complies with the provisions of the Code of Practice for the Governance of State Bodies.

Following revision and approval of the EPA's Risk Management Policy in 2018, the risk appetite statement, the risk management processes in place (Figure 12) and the roles and responsibilities of staff in relation to risk were updated during 2019.

An Executive Risk Committee (ERC) (chaired by the Chief Risk Officer) is in place and is made up of two directors and three programme managers. In addition, an Audit and Risk Committee (ARC) is also in place with the membership made up of six external members and one EPA senior manager. The ERC and the ARC together have a responsibility for providing assurance to the EPA Board and advising on risk management. The ERC meets on a regular basis and met four times in 2019. The ARC meets on a regular basis and met five times in 2019.

The Corporate Risk Register identifies the key risks facing the EPA and details the controls and actions needed to mitigate risks and the responsibility for the operation of controls assigned to specific staff. The Corporate Risk Register is developed and managed by the ERC, reviewed by the ARC and presented to the EPA Board for approval. During 2019, the ERC in conjunction with the ARC, collaborated to redevelop the Agency's Corporate Risk Register.

**Figure 12.** Risk management process



The EPA carried out an assessment of the EPA's risks using the processes outlined in its Risk Management Policy. The EPA's principal risks are summarised in the table below:

**Table 8.** Summary of Risks

No.	Risk	Controls
1	Failure to respond effectively to a significant incident/emergency leading to pollution.	An incident management protocol is in place. The EPA remains an active member of the National Emergency Coordination Group (NECG)
2	Failure to comply with Health and Safety obligations.	We undertake proactive safety audits on areas of potential risk and follow-up on identified actions and will continue to embed the safety management system throughout the EPA.
3	Failure of Information and communication technology security controls against cyber-attacks and loss of functionality.	We implement the Information & Communication Technology (ICT) Security Policy and Procedures and maintain ongoing investment in training and updating security defences. The EPA also continues to liaise with the National Cyber Security Centre in the DCCAE on matters relating to cyber security.
4	Failure to maintain and improve timeliness of environmental licensing decisions in the context of a growing economy.	We prepare and implement an annual licensing plan. Workforce planning has identified resource gaps and engagement is ongoing with the DCCAE to address this. We maintain ongoing investment in training and undertake improvement projects to improve our efficiency.

### Internal audit

During 2019, the internal audit programme was actively progressed and recommendations from previous audits were implemented. In accordance with the Code, a formal external review of the effectiveness of the Audit and Risk Committee was carried out in 2019.

The following audits were completed in 2019:

- ▲ Review of Payroll and Pensions 2018.
- ▲ Internal Audit of EU-Emissions Trading Scheme processes and procedures.
- ▲ Review of the EPA's Safety Management System.
- ▲ Internal Audit of Enforcement Procedures.
- ▲ Review of Internal Financial Controls 2019.

### Strategic Plan

The EPA's five-year Strategic Plan, launched in 2016, continued to provide a focus and direction for the EPA's work activities throughout 2019. Following a review of the plan in 2018, which considered changes to the EPA's external environment as well as achievements since the plan was first published, new priorities were identified for the 2019 work programmes including actions in the areas of regulatory Circular Economy and the National Dialogue on Climate Action. Progress on the strategic actions received continuous focus during the year, with regular updates on various actions presented to the EPA's senior management every two months.

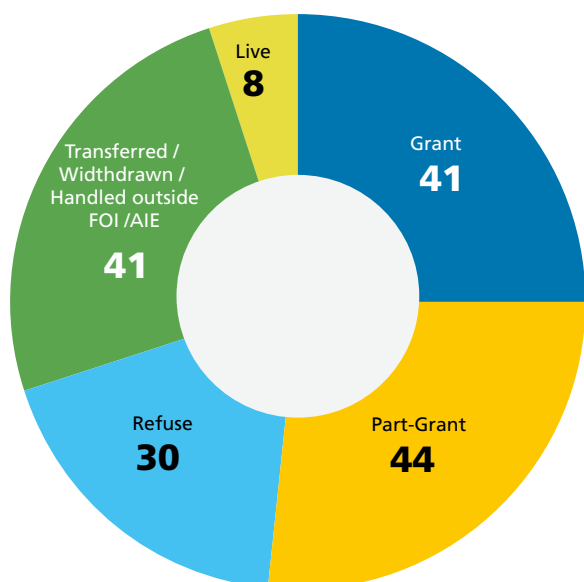


## Access to information

The EPA is committed to be an open and accessible organisation. The Freedom of Information (FOI) Act, 2014, as amended, and the Access to Information on the Environment (AIE) Regulations are two methods of accessing information for those members of the public who have not been able to access the information they require under alternative routes. The EPA publishes as much information as possible in an open and accessible manner on a routine basis outside FOI, having regard to the principles of openness, transparency and accountability. This allows for the publication or giving of records outside of FOI, provided that such publication or giving of access is not prohibited by law.

During 2019, the EPA received 65 FOI requests and a further three were carried over from 2018. Under the AIE Regulations, the EPA received 84 requests and 12 were carried over from 2018. Figure 13 illustrates the Decisions issued on the requests processed during 2019. Where requests were refused, the information refused was either personal, did not exist, was commercially sensitive or the requests were voluminous or manifestly unreasonable.

**Figure 13.** FOI & AIE Decision January to December 2019



## Protected disclosures

Section 22 of the Protected Disclosures Act 2014 requires the publication of an annual report relating to the number of protected disclosures made in the preceding year and any actions taken in response to such disclosures.

The EPA confirms that no disclosures were made to the EPA as an employer, under Section 6 of the Act, for 2019.

The Director General of the EPA, in the context of her role as a Prescribed Person in relation to disclosures of relevant wrongdoings of all matters relating to the protection of the environment in the State, received no disclosures from parties external to the EPA during the year.









## 6. APPENDICES

### 6.1 PROMPT PAYMENT OF ACCOUNTS ACT 1997

The EPA comes under the remit of the Prompt Payment of Accounts Act, 1997, which came into effect on 2 January 1998, and the European Communities (Late Payment in Commercial Transactions) Regulations 2002, which came into effect on 7 August 2002.

It is the policy of the EPA to ensure that all invoices are paid promptly. Specific systems and procedures have been put in place to enable invoices to be tracked and to ensure that payments are made before their due date. Purchase invoices are logged daily in Accounts Section and are followed up systematically to ensure that they are certified for payment without delay. Payments are issued as required to ensure prompt payment.

These controls are designed to provide reasonable, but not absolute, assurance against material non-compliance with the Act and Regulations.

There was one late payment with a value in excess of €317 during 2019 and this exceeded the due payment date by 13 days. The value of this late payment was €7,544.82.

Overall, late payments represented 0.025 % of the total value of payments covered by the Act, with total associated penalty interest of €21.50.



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**Laura Burke**

Director General EPA

30 June 2020



## 6.2 CONSULTANTS & ADVISERS ENGAGED

Acustica Ltd	Integrated Risk Solutions
Aether Ltd.	JBA Consulting
Ash Glebe Informatics Ltd	Katestone Environmental Pty Ltd
ByrneWallace	Levett-Therivel
Camp Dresser & McKee (Ireland) Ltd	Mason, Hayes & Curran
Carr Communications Ltd	McDowell Purcell Solicitors (Fieldfisher Ireland)
CERC (GBP)	Mazars
Certification Europe Ltd.	Mentoring Connection
Cerena Consulting Limited	Organisation for Economic Cooperation and Development (OECD)
Clean Technology Centre	Operational Command Training Organisation
Conscia (A brand of Connexus Recruit)	Remy Farrell S.C
Continuum Technologies Ltd.	Ricardo-AEA
Crowleys DFK	RPS Group
Crowe Advisory Ltd	Scott Crawley
Dental Compliance Ltd.	Smith and Williamson
Dr Robbie Meehan	SureLeaf Systems
Enviroguide Consulting	SWECO UK
Gartner Ireland Ltd.	TMC Consultants Ltd T/A Antaris
Geosyntec Consultants Ltd	Willis Towers Watson
Greenville Procurement Partners Ltd	

## 6.3 EPA PUBLICATIONS 2019

EPA publications are available to download from the EPA website: [www.epa.ie/pubs/reports/](http://www.epa.ie/pubs/reports/)

### Air

The following air reports can be found on the EPA website at: [www.epa.ie/pubs/reports/air/](http://www.epa.ie/pubs/reports/air/)

- ▲ *Air Quality in Ireland 2018*
- ▲ *Urban Environmental Indicators: Nitrogen dioxide levels in Dublin*
- ▲ *Technical Report 1: Nitrogen Dioxide Diffusion Tube Assessment Dublin*
- ▲ *Technical Report 2: Modelling Assessment of Air Quality in Dublin*
- ▲ *Provisional estimates of Ireland's greenhouse gas emissions 1990-2018*
- ▲ *Ireland's greenhouse gas emissions projections 2018-2040*
- ▲ *Ireland's air pollutant emissions 1990-2030*
- ▲ *Ireland's final greenhouse gas emissions 1990-2017*
- ▲ *Ireland's national inventory submissions 2019*

### Corporate

The following corporate reports can be found on the EPA website at: [www.epa.ie/pubs/reports/other/corporate/](http://www.epa.ie/pubs/reports/other/corporate/)

- ▲ *EPA Year in Review- Highlights from 2018- English and Irish*
- ▲ *RedC Infographic exploring attitudes to environmental issues*
- ▲ *EPA Annual Report and Accounts 2017- English and Irish*
- ▲ *EPA Customer Charter- English and Irish*
- ▲ *EPA Annual Report and Accounts 2018- English and Irish*

### Radiation

The following radiation reports can be found on the EPA website at: [www.epa.ie/pubs/reports/radiation/](http://www.epa.ie/pubs/reports/radiation/)

- ▲ *Code of Practice on the application of the Ionising Radiation Regulations (IRR19) in Dentistry 2019*

### Enforcement

The following enforcement reports can be found on the EPA website at: [www.epa.ie/pubs/reports/enforcement/](http://www.epa.ie/pubs/reports/enforcement/)

- ▲ *EPA Industrial and Waste license enforcement report 2018*
- ▲ *Compliance and Enforcement Policy*

### Waste

The following waste reports can be found on the EPA website at: [www.epa.ie/pubs/reports/waste/](http://www.epa.ie/pubs/reports/waste/)

- ▲ *Hazardous waste statistics for Ireland 2017*

### Water

The following water reports can be found on the EPA website at: [www.epa.ie/pubs/reports/water/](http://www.epa.ie/pubs/reports/water/)

- ▲ *Water Quality in Ireland 2013-2018*
- ▲ *Infographic on Water Quality in Ireland 2013-2018*
- ▲ *Drinking Water Quality in Public Supplies 2018*
- ▲ *Infographic on Drinking Water Quality in Public Supplies 2018*
- ▲ *Infographic on Focus on Private Water Supplies 2018*
- ▲ *Bathing Water Quality in Ireland 2018*
- ▲ *Infographic on Bathing Water Quality in Ireland 2018*
- ▲ *Bathing Water Quality Map 2018*
- ▲ *Domestic Waste Water Treatment Systems 2017-2018*
- ▲ *Urban Waste Water Treatment in 2018*

### Guidance documents

The following guidance notes can be found on the EPA website at: [www.epa.ie/pubs/advice/](http://www.epa.ie/pubs/advice/)

- ▲ *Guidance Notes to Local Authorities on Implementing a Radon Measurement Programme*
- ▲ *Advice on Setting a Reference Level for Radon Concentrations in Long-Stay Institutions*
- ▲ *EPA Registered Radon Remediation Services*
- ▲ *Radon Measurement Services Registration Form and Guidelines*
- ▲ *Protocol for Measurement of Radon in Homes & Workplaces*
- ▲ *List of Source Transporters in Ireland*
- ▲ *Environmental Sensitivity Mapping (ESM) - User Manual*
- ▲ *Integrating Climatic Factors into Strategic Environmental Assessment in Ireland – A Guidance Note*
- ▲ *Good practice note on SEA for the Waste Sector*
- ▲ *Good practice note on SEA for the Forestry Sector*
- ▲ *SEA of Local Authority Land Use Plans – EPA Recommendations and Resources*
- ▲ *SEA Spatial Information Sources Inventory - June 2019*
- ▲ *EPA Approach to Environmental Liabilities and Financial Provision*
- ▲ *Additional Guidance on Environmental Impairment Liability Insurance*
- ▲ *EPA Guidance for Licensees on Requests for Alterations to the installation/facility*
- ▲ *EPA Clarification Note on the Requirements for Underground Pipeline Testing at Industrial and Waste Licensed Sites*
- ▲ *Guidance Note to Industry on Fire Water Retention Facilities*

- ▲ *Guidance document on Alteration Request web-form layout*
- ▲ *Air Guidance note for in-house monitoring teams (AG8)*
- ▲ *Environmental Performance Reporting Guidance Note*
- ▲ *Guidance on Soil and Stone as a By-Product*
- ▲ *End-of-Waste Criteria for Pulverised Fuel Ash and Furnace Bottom Ash - Electricity Supply Board (ESB)*
- ▲ *End of Waste Criteria Recycled Aggregates - IMS*
- ▲ *End-of-Waste Criteria for Recycled Aggregates - Panda Greenstar*
- ▲ *End-of-Waste Criteria for Poly(ethylene Phthalate) Recyclate - Shabra Recycling Limited*
- ▲ *Guidance for Exhibitors - Compliance with the WEEE and Batteries Regulations*
- ▲ *Guidelines for EPA-Funded Research Project Twitter Accounts*
- ▲ *Odour Impact Assessment Guidance for EPA Licensed Sites (AG5)*
- ▲ *Odour Emissions Guidance Note (Air Guidance Note AG9)*
- ▲ *Ireland's Air Pollutant emissions 2017 (1990-2030)*
- ▲ *Summary of PAN Register 17 December 2019*
- ▲ *Guidance on the Preparation and Submission of the Annual Environmental Report for Waste Water Discharge Licences*
- ▲ *Ireland's National Inventory Submissions 2019*
- ▲ *Revision of ETS Directive and Introduction to Phase 4 Free Allocation Rules*
- ▲ *EU Emissions Trading Scheme 2019 - Declaration Form*
- ▲ *Phase 4 Monitoring Methodology Plan template*
- ▲ *General Overview and Allocation Rules in Detail 2019*
- ▲ *Phase 4 Free Allocation Rules - Verification Report Template*
- ▲ *Phase 4 Baseline Data Report template*
- ▲ *National Allocation Table Changes 1 2019*
- ▲ *National Allocation Table Changes 2 2019*
- ▲ *Current National Allocation Table*
- ▲ *Ireland's UNECE Submissions 2019*
- ▲ *Union Registry - Items of Interest*
- ▲ *Dumping at Sea Guidance Note*
- ▲ *Monitoring and Reporting Requirements 2019*
- ▲ *Presentation from EPA workshop 27th February 2019*
- ▲ *Addendum to 2006 Guidelines for the Assessment of Dredged Material in Irish Waters (Marine Institute, 2019)*
- ▲ *Domestic Waste Water Treatment Systems 2017 -2018*
- ▲ *Bathing Water Infographic 2018*
- ▲ *Ireland NIMS 2019*
- ▲ *Ireland's Provisional Greenhouse Gas emissions 1990-2018*
- ▲ *Ireland's Final Greenhouse Gas emissions 1990-2017*
- ▲ *Focus on Private Water Supplies 2018 Infographic*
- ▲ *Sligo County Council Drinking Water Supplies 2018*
- ▲ *Guidelines for the Assessment of Dredge Material for Disposal in Irish Waters 2006*
- ▲ *Guidance on the Preparation and Submission of the Annual Environmental Report for Waste Water Discharge Licences*
- ▲ *Landfill gas survey 2018*
- ▲ *Waste Water Discharge Site Visit Report*
- ▲ *Drinking Water Quality Public Supplies 2018 Infographic*
- ▲ *EPA-HSE Joint Position Paper on Pesticides in Drinking Water*
- ▲ *Drinking water Supplies reports, by county for the year 2018 ([www.epa.ie/pubs/advice/drinkingwater/drinkingwatersupplies2018/](http://www.epa.ie/pubs/advice/drinkingwater/drinkingwatersupplies2018/))*

## 6.4 ENVIRONMENTAL RESEARCH REPORTS

### Air quality

The following air quality research reports can be found on the EPA website at <http://www.epa.ie/pubs/reports/research/air/>

- ▲ *Research 269: Online Bioaerosol Sensing (OLBAS)*
- ▲ *Research 270: Air Quality Monitoring for Ireland*
- ▲ *Research 276: EU ETS and competitiveness of Irish Industry*
- ▲ *Research 298: An Integrated Source Apportionment and Climatic Implications of PM<sub>2.5</sub> and PM<sub>10</sub> Particulate Matter*
- ▲ *Research 303: Research Support for Integrated Atmospheric Studies at Mace Head*

### Climate change

The following climate change research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/climate/](http://www.epa.ie/pubs/reports/research/climate/)

- ▲ *Research 265: Challenges of Transformative Climate Change Adaptation: Insights from Flood Risk Management*
- ▲ *Research 266: Ground-Based Remote- Sensing Synergy for Cloud Properties and Aerosol Cloud Interactions*
- ▲ *Climate Research Coordination Group: First report on activities: June 2017- December 2018*
- ▲ *Research 277: Irish Climate Futures: Data for decision-making*



- ▲ Research 286: CON+ AIR: Addressing conflicts of climate and air pollution
- ▲ Research 287: Catalysing and Characterising Transition
- ▲ Research 288: A Review of Livestock Methane Emissions Factors
- ▲ Research 299: Assessment of Agricultural Activity on Drained Organic Soils
- ▲ Research 300: Climate Change in Irish Media
- ▲ Research 301: Adaptive Responses to Climate Impacts (ARC)
- ▲ Research 302: Fossil Fuel Lock-In in Ireland: How much value is at risk?
- ▲ Research 304: Scaling Soil Greenhouse Gas Emissions to the National Level
- ▲ Research 305: BRIAR: Biomass Retrieval in Ireland using Active Remote Sensing

## Biodiversity

The following biodiversity research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/biodiversity/](http://www.epa.ie/pubs/reports/research/biodiversity/)

- ▲ Research 275: Assessing Market and Non-Market Values of Pollination Services in Ireland: Pollival Literature Review
- ▲ Research 291: Assessing Market and Non-Market Values of Pollination Services in Ireland

## Environmental technologies

The following environmental technology research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/tech/](http://www.epa.ie/pubs/reports/research/tech/)

- ▲ Research 268: FloodWarn Tech Synthesis Report: Flood Warning Technologies for Ireland
- ▲ Research 278: Developing and Testing an Environmental Sensitivity Mapping Webtool to Support Strategic Environmental Assessment in Ireland
- ▲ Research 281: Heavy Metal Recovery from Industrial Waste with Biosorbent Mesoporous Materials (BioMES)
- ▲ Research 296: Algeopolymers
- ▲ Best Practises from the Environmental Implementation Review 2019 across the EU 28 countries

## Environment and Health

The following environment and health research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/health/](http://www.epa.ie/pubs/reports/research/health/)

- ▲ Research 273: UNVEIL: Understanding ventilation and radon in energy-efficient buildings in Ireland
- ▲ Research 295: Research on aspects of Ireland's Environment, Consumer Behaviour and Health: ESRI Environment Research Programme 2016- 2018

## Water

The following water research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/water/](http://www.epa.ie/pubs/reports/research/water/)

- ▲ Research 267: High-Resolution Gridded Datasets of Hydro-Climate Indices for Ireland
- ▲ Research 285: Nutrient Dynamics and Ecophysiology of Opportunistic Macroalgal Blooms in Irish Estuaries and Coastal Bays (SeaMAT)
- ▲ Research 289: Phosphorus from Waste Water: Novel Technologies for Advanced Treatment and Reuse
- ▲ Research 293: Water Reuse in the Context of the Circular Economy
- ▲ Research 297: Identification and Mapping of Water-Related Research Infrastructure in Ireland

## Waste and Resource Management


The following resource management research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/waste/](http://www.epa.ie/pubs/reports/research/waste/)

- ▲ Research 271: Resource Efficiency in Priority Irish Business Sectors
- ▲ Research 272: Evaluation of Hand-Held XRF for Screening Waste Articles for Exceedance of Limit Values for Brominated Flame Retardants
- ▲ Research 274: AgriBenchmark: Benchmarking Sustainable Nutrient Management on Irish Farms
- ▲ Research 279: The Role of Incentivising Biomethane in Ireland using Anaerobic Digestion
- ▲ Research 282: Reducing Commercial Food Waste in Ireland
- ▲ Research 292: Developing Frameworks for Evaluation and Mitigation of Environmental Impact of Infant Feeding Decisions on Healthcare and Society
- ▲ Research 294: Investigation of Indium Recovery from End-of-Life LCDs

## Socio-Economics

The following socio-economic research reports can be found on the EPA website at: [www.epa.ie/pubs/reports/research/econ/](http://www.epa.ie/pubs/reports/research/econ/)

- ▲ Research 280: Developing the Potential of Third-Level Campuses as Change Agents in Transition towards Sustainable Communities
- ▲ Research 283: Beyond Neoliberalism, Values and Sustainable Consumption Behaviour
- ▲ Research 290: Environmental Policy Integration: Innovation and Change



**Governance Statement and Director's Report**

**Statement on Internal Control**

**Report of the Comptroller and Auditor General**

**Statement of Income and Expenditure and Retained Revenue Reserves**

**Statement of Comprehensive Income**

**Statement of Financial Position**

**Statement of Cash Flows**

**Notes to the Financial Statements**



## 7. FINANCIAL STATEMENTS

### 7.1 GOVERNANCE STATEMENT AND DIRECTORS' REPORT 2019

#### Governance

The Environmental Protection Agency (Agency/EPA) was established under the *Environmental Protection Agency Act, 1992*, as amended (the Act). In accordance with Section 19 of the Act the Agency consists of a Director General and five Directors.

The Director General and other Directors are appointed by the Government in accordance with Sections 21 and 24 of the Act. The functions of the EPA are set out in Part III of the Act. The Director General and the Directors are accountable to the Minister for Communications, Climate Action and Environment and the Minister for Housing, Planning and Local Government. The Director General and Directors are responsible for ensuring good governance and perform this task by setting strategic objectives and targets and taking strategic decisions on all key business issues. The regular day-to-day management, control and direction of the EPA are the responsibility of the Director General and the Directors.

The Act does not use the term 'Board' to designate the organisation's governing body; instead, the Act refers to 'the Agency' and designated 'Directors of the Agency'. The Directors of the Agency are referred to as 'Executive Board Members', and the Agency's governing body is known as its Executive Board.

The Executive Board fulfils both governance and management roles.

The Director General serves as Chair of the Executive Board and operational chief executive of the EPA, fulfilling both governance and management roles and is responsible for running the Agency. The Director General is accountable to the Oireachtas through the Public Accounts Committee.

The five Directors also serve as the executive management team with day-to-day operational responsibility.

#### Executive Board Responsibilities

The EPA has been granted a wide range of powers and duties under the *Environmental Protection Agency Act, 1992*, as amended and other relevant environmental and radiation protection legislation.

The role of the Board of any public body is to provide strategic leadership, direction, support and guidance for the body and promote commitment to its core values, policies and objectives. In addition to the special Board responsibilities set out in the Code of Practice for the Governance of State Bodies (the Code) and in the Act, the EPA's Executive Board holds specific governance and management responsibilities as the Board of a State body which include:

- ▲ To ensure that the body carries out its responsibilities as set out by statute or by ministerial order.
- ▲ To provide leadership, vision and direction for the body.
- ▲ To define the mission of the body, decide its strategic goals and develop the policies required to achieve those goals.
- ▲ To ensure good management, to monitor the achievements of management and to ensure that a proper balance is achieved between the respective roles of board and management.
- ▲ To set performance targets, including key financial targets and in particular, to agree and closely monitor the budget.
- ▲ To ensure that the body behaves ethically and in a manner that accords with the core values of the body.
- ▲ To define and promote the body's role in the community by developing mechanisms for gathering the views of customers and stakeholders and by keeping people informed in an open, accountable and responsible way.

Legislatively, the Executive Board has responsibility for the management of the EPA, but for practical purposes it is empowered to delegate responsibility to other staff for operational purposes. Section 25(6) of the Act provides that the Agency may perform or exercise any of its functions through or by any director or other person or body who has been duly authorised by the Agency in that behalf.

Since the establishment of the EPA, the Executive Board has delegated discretionary powers to various levels in the EPA. The delegation of powers continues to grow as the Agency acquires further legislative functions over time.

The current Strategic Plan: *Our Environment, Our Wellbeing* covers the period 2016-2020. This Plan sets out the priority actions that the EPA will take in that period to deliver on its mission of protecting and improving our environment as a valuable asset for the people of Ireland and to protect our people and the environment from the harmful effects of radiation and pollution. It highlights the importance of a clean, protected environment for our health, our wellbeing and our quality of life. The EPA has identified five strategic goals for its Strategy:

- ▲ Trusted Environmental Regulator
- ▲ Leader in Environmental Evidence & Knowledge
- ▲ Effective Advocate and Partner
- ▲ Responding to Key Environmental Challenges
- ▲ Organisationally Excellent.



The work and responsibilities of the EPA are set out in: the EPA Corporate Strategy 2016-2020; the EPA Work Programme; and the Oversight Agreement with the Department of Communications, Climate Action & Environment and the Department of Housing, Planning & Local Government.

Each month, the Executive Board has a dedicated meeting on governance and management issues which include:

- ▲ Declaration of interests.
- ▲ Progress reports on operational issues from individual Offices.
- ▲ Financial management.
- ▲ Strategic planning.
- ▲ Communications management.
- ▲ Corporate Governance issues (including internal audit).
- ▲ HR and staffing issues.

Section 50 of the *Environmental Protection Agency Act, 1992* requires the EPA to keep, in such form as may be approved by the Minister for Communications, Climate Action and Environment with consent of the Minister for Public Expenditure and Reform, all proper and usual accounts of money received and expended by it.

In preparing these financial statements, the EPA is required to:

- ▲ select suitable accounting policies and apply them consistently;
- ▲ make judgements and estimates that are reasonable and prudent;
- ▲ prepare the financial statements on the going concern basis unless it is inappropriate to presume that it will continue in operation;
- ▲ state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements.

The EPA is responsible for keeping adequate accounting records which disclose, with reasonable accuracy at any time, its financial position and enables it to ensure that the financial statements comply with Section 50 of the Act. The maintenance and integrity of the corporate and financial information on the EPA's website is the responsibility of the Director General and Directors.

The Executive Board is responsible for approving the annual plan and budget. The performance of the EPA is monitored on a monthly basis through the submission to the Executive Board of progress reports on the EPA's Key Performance Indicators. A year-end evaluation of the 2019 EPA Work Programme Activities was completed and the 2019 year-end Financial Management Report was submitted to the Executive Board in February 2020.

The EPA is also responsible for safeguarding its assets and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Executive Board considers that the financial statements of the EPA give a true and fair view of the financial performance and the financial position of the EPA at 31 December 2019.

### Executive Board Structure

The Executive Board consists of a Director General and five other Directors, one of whom acts as Deputy Director General, all of whom are appointed by the Government. The Director General is appointed for a period of seven years and the other Directors were appointed for a period of five years. In accordance with Sections 21 and 24 of the Act, the Director General and Directors respectively may be reappointed by the Government for a second or subsequent term of office.

The Executive Board met for General Board meetings on fifteen occasions in 2019. The table below details the appointment period for current members:

Executive Board Member	Role	Date Appointed
Laura Burke	Director General	8 November 2011*
Gerard O'Leary	Deputy Director General	8 May 2012*
Matthew Crowe	Director	11 April 2010*
Micheál Lehane	Director	1 May 2016
Eimear Cotter	Director	1 September 2017
Tom Ryan	Director	25 August 2018

\* second term

## Audit and Risk Committee

The EPA has established an Audit and Risk Committee (ARC) that comprises six external members and one member from EPA Senior Management. The role of the ARC is to support the Executive Board in relation to its responsibilities for issues of risk, control and governance and associated assurance. The ARC is independent from the financial management of the organisation. In particular, the ARC ensures that the internal control systems including audit activities are monitored actively and independently. The Chairperson of the ARC meets regularly with the Director General and reports at least annually to the Board on the performance of the ARC.

There were five meetings of the ARC in 2019. The members of the ARC changed during 2019 due to the conclusion of the terms of appointment for Dr Brian Cawley, Dr Ian d'Alton and Ms Marie O'Connor. The members of the Audit and Risk Committee during 2019 are outlined below:

ARC Member	Changes to Term during 2019
Brian Cawley (Chairperson)	concluded May 2019
Tom Barry (Chairperson)	Previously on the ARC and appointed Chairperson from June 2019
Marie O'Connor	concluded February 2019
Ian d'Alton	concluded July 2019
Ciara McMahon	appointed from January 2019
Nuala Bannon	appointed from June 2019
John Maher	appointed from September 2019
Eugene Kennedy	unchanged
Caroline Bocquel	unchanged
Allan Reid	unchanged

## Executive Board Subcommittees

The Executive Board has established two Executive Board Subcommittees.

- 1. ICT Board Subcommittee:** comprises three Executive Board members and is supported by senior Programme Managers and the senior ICT team. The Executive Board members of this committee are: Dr Micheál Lehané (Chairperson), Dr Matthew Crowe and Mr Gerard O'Leary. There were seven meetings of the ICT Board Subcommittee in 2019.
- 2. Safety, Health and Welfare (SHW) Board Subcommittee:** comprises three Executive Board members. The members of this committee are: Mr Gerard O'Leary (Chairperson), Dr Matthew Crowe and Dr Micheál Lehané. There were six meetings of the SHW Board Subcommittee in 2019.

## External Advisory /Consultative Committees

The Executive Board is also advised by the following key external committees, each of which was established under legislation:

- ▲ EPA Advisory Committee
- ▲ Dumping at Sea Advisory Committee\*
- ▲ Genetically Modified Organisms (GMO) Advisory Committee
- ▲ Health Advisory Committee\*
- ▲ Radiological Protection Advisory Committee\*

\*established under Section 41 of the Environmental Protection Agency Act, 1992, as amended.

## Schedule of Attendance, Fees and Expenses

There were 15 General Executive Board meetings in 2019. A schedule of attendance at the General Executive Board meetings for 2019 is set out below. Fourteen of the 15 General Board meetings were held in EPA headquarters and one General Board Meeting was held in EPA Inspectorate, Castlebar:

Number of meetings	Board	Fees 2019 €	Expenses 2019 €
Laura Burke	14	0	364
Gerard O'Leary	15	0	541
Matthew Crowe	12	0	303
Micheál Lehané	14	0	508
Eimear Cotter	11	0	0
Tom Ryan	13	0	289
<b>Total</b>		<b>0</b>	<b>2,005</b>

A schedule of attendance at the ARC meetings for 2019 is set out below including the fees and expenses received by each member:

Number of meetings	Audit & Risk Committee Attended/ Out of Possible	Fees 2019 €	Expenses 2019 €
Brian Cawley (Chairperson to May)	3/3	2,250	0
Tom Barry (Chairperson from June)	5/5	0	1,082
Ian d'Alton	4/4	0	405
Nuala Bannon	2/2	0	226
Caroline Bocquel	3/5	0	183
Eugene Kennedy	5/5	0	1,247
Ciara McMahon*	3/4	0	397
John Maher	1/1	0	274
Marie O'Connor*	1/1	0	390
Allan Reid	5/5	0	**1,825
<b>Total</b>		<b>2,250</b>	<b>6,029</b>

\* EPA Staff member.

\*\* All expenses paid directly to the Scottish Environment Protection Agency.

### Disclosures Required by Code of Practice for the Governance of State Bodies (2016)

The Executive Board is responsible for ensuring that the EPA has complied with the requirements of the Code, as published by the Department of Public Expenditure and Reform in August 2016. The following disclosures are required by the Code:

#### Employee Short-Term Benefits Breakdown

Employees' short-term benefits in excess of €60,000 are set out in Note 8 (c) of the financial statements.

#### Consultancy Costs

Consultancy costs include the cost of external advice to management and exclude outsourced 'business-as-usual' functions and staff training and development providers.

	2019 €	2018 €
Legal Advice, including Financial Provision of Licensed Activities	831,817	514,212
Pension Scheme Actuarial Valuation	3,690	3,014
HR Consultancies	38,121	24,240

Public Relations/Marketing	50,824	59,680
Internal Audit & Corporate Governance	72,293	64,231
Business Continuity Consultancy	10,946	0
Buildings Assessments & Audit Services	9,139	11,132
Procurement Consultancy and Advice	43,035	21,409
VAT Consultancy / Advice	2,399	0
Website Design and Development	40,102	40,307
Strategy Development and Implementation	24,243	55,626
Environmental and Radiological Programme Consultancies	104,336	91,508
GDPR Consultancy	52,411	86,695
OECD Review of EPA	100,000	100,000
<b>Total Consultancy Costs</b>	<b>1,383,356</b>	<b>1,072,054</b>

#### Legal Costs and Settlements

The table below provides a breakdown of amounts recognised as expenditure in the reporting period in relation to legal costs, settlements and conciliation and arbitration proceedings relating to contracts with third parties. This does not include expenditure incurred in relation to general legal advice received by the EPA which is disclosed in Consultancy costs above.

	2019 €	2018 €
Legal fees – legal proceedings	653,874	810,392
Conciliation and arbitration payments	0	0
Settlements	0	0
<b>Total</b>	<b>653,874</b>	<b>810,392</b>

#### Travel and Subsistence Expenditure

Travel and subsistence expenditure is categorised as follows:

	2019 €	2018 €
<b>Domestic</b>		
- Executive Board	69,899	71,264
- Employees	1,369,678	1,389,826
<b>International</b>		
- Executive Board	14,570	18,657
- Employees	322,491	327,723
<b>Total *</b>	<b>1,776,638</b>	<b>1,807,470</b>

\*This does not take account of reimbursement of travel costs received by the EPA



## Hospitality Expenditure

The Statement of Income and Expenditure and Retained Revenue Reserves includes the following hospitality expenditure:

	2019 €	2018 €
Staff hospitality*	13,620	29,655
Other hospitality	206	610
<b>Total</b>	<b>13,826</b>	<b>30,265</b>

\*Includes Employee Assistance Programme costs of €3,605 in 2019 (2018 €20,245).

## Events after the reporting date

Since the reporting date, the COVID-19 outbreak has developed rapidly and the scale of the potential impact is emerging. As the COVID-19 situation continues to evolve, EPA is monitoring developments closely, looking to mitigate the risk that it may have on the Agency's employees and stakeholders. EPA has established a Pandemic Response Team to advise the Board and manage the Agency's response to COVID-19. A Coronavirus contingency plan has been developed setting out a number of actions to protect the safety, health and welfare of EPA staff, contractors, customers and stakeholders while also seeking to limit the disruption to the EPA's work.

EPA's activities are included in the list of essential services in Schedule 2 of SI No. 121/2020 and the work of EPA has continued during the lockdown. It is too early to fully assess the impact of the outbreak on the operational and financial performance of the Agency at this time, but the Agency does not believe that COVID-19 will impact on its ability to continue to operate as a going concern.

## Statement of Compliance

The Board has adopted the Code of Practice for the Governance of State Bodies (2016) and during 2017 put procedures in place to ensure compliance with the Code. The EPA was in compliance with the Code of Practice for the Governance of State Bodies for 2019.

Signed on behalf of the Executive Board.



**Laura Burke**

Director General

Date: 30 June 2020

## 7.2 STATEMENT ON INTERNAL CONTROL 2019

### 1. Scope of Responsibility

On behalf of the Environmental Protection Agency (EPA) I acknowledge the Directors' collective responsibility for ensuring that an effective system of internal control is maintained and operated, for preparing the accounts of the EPA and for complying with all statutory obligations applicable to the EPA. This responsibility takes account of the requirements of the Code of Practice for the Governance of State Bodies (2016).

### 2. Purpose of the System of Internal Control

The system of internal control is designed to manage risk to a tolerable level rather than to eliminate it. The system can therefore only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded and that material errors or irregularities are either prevented or detected in a timely way. While the effectiveness of an internal control system can change over time, the EPA reviews and updates such systems as required.

The system of internal control, which accords with guidance issued by the Department of Public Expenditure and Reform has been in place in the EPA for the year ended 31 December 2019 and up to the date of approval of the financial statements.

### 3. Key Control Procedures to Provide Effective Internal Control

#### i) Annual Review of the Effectiveness of Control

The Executive Board conducted an annual review of the effectiveness of the internal controls for 2019 in February 2020. In undertaking this review the Directors considered the following:

- ▲ Details of the system of internal controls in 2019 including Risk Management, Financial Management, Internal Audit, Ethics, Information Systems, Business Planning & Reporting
- ▲ Report on the Review of the Effectiveness of Internal Financial Controls 2019
- ▲ Compliance Officer's Report 2019
- ▲ IT Compliance Report 2019
- ▲ Health, Safety & Welfare Assurance Statement 2019
- ▲ Risk Management Assurance Statements 2019

Annual Assurance Statements in relation to Budgetary Responsibilities 2019 have been signed and presented to the Director General, in line with the provisions of the EPA Finance Manual.

#### ii) Breaches in Control

There were no reported instances of breaches in control in 2019.

#### iii) Material Losses or Frauds

There were no reported material losses or frauds in 2019.

#### iv) Review of Statement on Internal Control by Audit & Risk Committee

This Statement on Internal Control 2019 was reviewed by the EPA Audit & Risk Committee and the Directors in February 2020 to ensure that it accurately reflects the control system in place during 2019.

#### v) Review of Statement on Internal Controls by the internal auditors

This Statement on Internal Controls 2019 was reviewed by the internal auditors in January 2020 and presented to the ARC and the Board in February 2020 to ensure that it accurately reflects the EPA's compliance with its statutory and other requirements during 2019.

#### vi) Steps taken to ensure an appropriate control environment

The Directors of the EPA have taken steps to ensure an appropriate control environment within the EPA by:

- ▲ Developing and publishing the EPA Strategic Plan 2016-2020 – Our Environment, Our Wellbeing. This Strategy sets out the EPA's Vision, Mission, Values, Goals and thirteen Strategic Objectives. Implementation of the Strategy is monitored by the Senior Management Network, comprising Directors and Programme Managers, and reported to the Executive Board of the EPA on a periodic basis.
- ▲ Engaging the OECD to conduct a review of EPA's institutional and organisational set-up. The review examined our structures, accountability, business processes, reporting and performance management as well as role clarity, relationships, distribution of powers and responsibilities with other government and non-government bodies.
- ▲ Agreeing a detailed work programme each year and monitoring and evaluating progress against that work programme on a monthly basis.
- ▲ Holding regular Executive Board meetings, including monthly management meetings where the Agenda includes strategic issues such as Corporate Governance, Financial Management, Corporate Strategy and staffing matters.
- ▲ Adopting an EPA Finance Manual and a set of financial policies and procedures to control the significant financial elements of the EPA's business.

- ▲ Adopting a Corporate Governance Manual to provide a clear and comprehensive summary of the principal aspects of corporate governance for the Directors and senior managers.
- ▲ Maintaining a comprehensive schedule of insurances to protect the EPA's interests.
- ▲ Establishing and maintaining an Audit & Risk Committee. (See Section 3(x) Monitoring Effectiveness of System of Internal Control).
- ▲ Establishing and operating a Risk Management Policy and Framework, appointing an Executive Risk Committee (ERC) and a Chief Risk Officer. (See Section 3(vii) Risk and Control Framework)
- ▲ Monitoring and assessing compliance with corporate legislation in accordance with EPA Policy.
- ▲ Defining management responsibilities, delegating appropriate functions and reviewing and approving all EPA policies and procedures.
- ▲ Adopting a Code of Business Conduct for Directors and Staff in accordance with the requirements of the Code of Practice for the Governance of State Bodies.
- ▲ Ensuring compliance with the Ethics in Public Office Acts requirements and Sections 37 & 38 of the EPA Act 1992, relating to the Declaration and Disclosure of Interests.
- ▲ Establishing mechanisms for ensuring the adequacy of the security of its information and communication technology (ICT) systems which include:
  - ▲ the establishment of appropriate policies and control procedures,
  - ▲ effective organisational structures including segregation of duties and
  - ▲ the delegation to the internal audit unit of the responsibility for specific reviews and evaluations of ICT systems through the process of Annual Internal Audit Plans.

Legislatively, the Board has responsibility for the management of the EPA, but it is empowered to delegate responsibility to other staff for operational purposes. Section 25(6) of the EPA Act provides that the Agency may perform or exercise any of its functions through or by any Director or other person or body who has been duly authorised by the Agency in that behalf. The Programme Managers in charge of various functions are delegated operational responsibility for carrying out the work of the EPA.

Since the establishment of the Agency, the Board of the Agency has delegated discretionary powers to various levels in the Agency. The delegation of powers continues to grow as the Agency is assigned further statutory responsibilities over time.

## vii) Risk and Control Framework

The EPA has implemented a risk management system which identifies and reports key risks and the management actions being taken to address and to the extent possible, to mitigate those risks.

The EPA has also developed a Risk Management Policy which sets out its risk appetite, the risk management processes in place and details the roles and responsibilities of staff in relation to risk. The EPA's Risk Management Policy and Structures are in compliance with the Code of Practice for the Governance of State Bodies 2016.

The Corporate Risk Register identifies the key risks facing the EPA and details the controls and actions needed to mitigate risks and the responsibility for the operation of controls assigned to specific staff. The Corporate Risk Register is developed and managed by the ERC, reviewed by the ARC and presented to the EPA Board for approval. During 2019, the ERC in conjunction with the ARC, collaborated to redevelop the Agency's Corporate Risk Register.

Each Director provides bi-annual assurance statements to the Executive Board acknowledging responsibility for the on-going update, monitoring and review of the Risk Register for their Office and for ensuring the implementation of the Risk Management Policy.

I can therefore confirm that a control environment containing the following elements is in place:

- ▲ Procedures for key business processes have been documented,
- ▲ Financial responsibilities have been assigned at management level with corresponding accountability,
- ▲ There is an appropriate budgeting system with an annual budget which is kept under review by senior management,
- ▲ There are systems aimed at ensuring the security of the information and communication technology systems,
- ▲ There are systems in place to safeguard the assets, and
- ▲ A system for the control of programme expenditure, including procedures for the approval and payment of grants and processes to monitor the progress towards achieving the objectives.

## viii) Financial & Budgetary Information

The system of internal controls is based on a framework of regular management information, a system of delegation and accountability, a set of financial and administrative procedures including segregation of duties. In particular it includes:

- ▲ A comprehensive budgeting system with an annual budget, which is reviewed and approved by the Executive Board. The budgeting system also includes the preparation



of two formal revised budgets in May and September, both of which are submitted to the Executive Board for approval.

- ▲ The assignment of budgets and budgetary authority and responsibility for specific functions to selected managers.
- ▲ Arrangements for all purchasing to be conducted and controlled through the EPA's financial management system and procedures.
- ▲ Monthly reviews by the Executive Board of financial management reports.
- ▲ Adoption of an annual Corporate Procurement Plan and appointment of a Procurement Officer.

#### ix) Procedures for addressing financial implications of major business risks

The financial implications of business risks have been considered through the formal business risk assessment process and in the preparation of the EPA Internal Audit Plans. These are further assessed and evaluated through the phased implementation of the EPA's Internal Audit Plan.

#### x) Monitoring effectiveness of System of Internal Control

The EPA has established and maintained an Audit & Risk Committee, comprising six external members, one of whom is the Chairperson and one EPA senior manager, as part of the on-going systematic review of the control environment and governance procedures within the EPA, to oversee the internal audit function and advise the Executive Board in relation to the operation and development of that function.

The EPA has established an internal audit function which is adequately resourced and conducts a programme of work agreed with the ARC. The EPA engages external expertise to conduct internal audits.

The EPA Internal Audit Plan 2019–2020 was progressively implemented during the year with progress on the implementation of the actions required arising from each audit reviewed periodically and reported to the Audit & Risk Committee and the Executive Board.

The Internal Audit Plan 2020–2021 was developed during 2019 and reflects the risks identified in the EPA's Corporate Risk Register, having regard to the 2018 Management Letter from the Comptroller and Auditor General and developments and issues in relation to Corporate Governance that have arisen in the Public Sector in general. This Internal Audit Plan was reviewed by the Audit & Risk Committee and approved by the EPA Executive Board in October 2019.

## 4. Procurement

I confirm that the EPA has procedures in place to ensure compliance with current procurement rules and guidelines. The EPA complied with these procedures during 2019.

## 5. Research Funding

The Department of Public Expenditure and Reform (DPER) Circular 13/2014 Management of and Accountability of Grants from Exchequer Sources (the Circular) outlines the public financial management principles, procedures and additional reporting requirements to be followed in the management of grant funding provided from public money.

The EPA has procedures for the approval and payment of grants and processes to monitor the progress towards achieving the research objectives.

In January 2019, the Department of Communications, Climate Action and Environment informed the EPA that it could continue to operate the existing pre-funding arrangements under the EPA's Research Programme pending receipt of formal DPER approval for 2019. Pre-funding sanction was issued by DPER on 19 December 2019 confirming approval for the continuation of the pre-funding arrangements during 2019. This approval was formally confirmed to the EPA in January 2020.

## 6. Review of Effectiveness

I confirm that the EPA has procedures to monitor the effectiveness of its risk management and control procedures. The EPA's monitoring and review of the effectiveness of the system of internal control is informed by the work of the internal and external auditors, the Audit and Risk Committee and the senior management within the EPA responsible for the development and maintenance of the internal control framework.

I confirm that the Directors conducted an annual review of the effectiveness of the internal controls for 2019 in February 2020 and are satisfied that the system of internal control is sound.

An Internal Audit of the Review of the Effectiveness of Internal Financial Controls was undertaken in November 2019 and January 2020 in accordance with the Internal Audit Plan 2019/2020. In the internal auditor's opinion, their assessment indicates that significant assurance can be placed on the sufficiency and operation of internal financial controls to mitigate and / or manage key inherent risks. The review identified three "Low" risk findings.

## 7. Internal Control Issues

No weaknesses in internal control were identified in relation to 2019 that require disclosure in the financial statements.

Signed on behalf of the Executive Board.



**Laura Burke**

Director General

Date: 30 June 2020

## 7.3 COMPTROLLER AND AUDITOR GENERAL REPORT FOR PRESENTATION TO THE HOUSES OF THE OIREACHTAS

### Opinion on financial statements

I have audited the financial statements of the Environmental Protection Agency for the year ended 31 December 2019 as required under the provisions of section 50 of the Environmental Protection Agency Act 1992. The financial statements comprise

- ▲ the statement of income and expenditure and retained revenue reserves
- ▲ the statement of comprehensive income
- ▲ the statement of financial position
- ▲ the statement of cash flows and
- ▲ the related notes, including a summary of significant accounting policies.

In my opinion, the financial statements give a true and fair view of the assets, liabilities and financial position of the Environmental Protection Agency at 31 December 2019 and of its income and expenditure for 2019 in accordance with Financial Reporting Standard (FRS) 102 – *The Financial Reporting Standard applicable in the UK and the Republic of Ireland*.

### Basis of opinion

I conducted my audit of the financial statements in accordance with the International Standards on Auditing (ISAs) as promulgated by the International Organisation of Supreme Audit Institutions. My responsibilities under those standards are described in the appendix to this report. I am independent of the Environmental Protection Agency and have fulfilled my other ethical responsibilities in accordance with the standards.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

### Report on Information other than the financial statements, and on other matters

The Environmental Protection Agency has presented certain other information together with the financial statements. This comprises the annual report, the governance statement and Directors' report and the statement on internal control. My responsibilities to report in relation to such information, and on certain other matters upon which I report by exception, are described in the appendix to this report.

I have nothing to report in that regard.



**Andrew Harkness**

For and on behalf of the  
Comptroller and Auditor General

30 June 2020

## APPENDIX TO THE REPORT

### Responsibilities of Directors

As detailed in the governance statement and Directors' report, the Directors are responsible for

- ▲ the preparation of financial statements in the form prescribed under section 50 of the Environmental Protection Agency Act 1992
- ▲ ensuring that the financial statements give a true and fair view in accordance with FRS 102
- ▲ ensuring the regularity of transactions
- ▲ assessing whether the use of the going concern basis of accounting is appropriate, and
- ▲ such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### Responsibilities of the Comptroller and Auditor General

I am required under section 50 of the Environmental Protection Agency Act 1992 to audit the financial statements of the Environmental Protection Agency and to report thereon to the Houses of the Oireachtas.

My objective in carrying out the audit is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement due to fraud or error. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, I exercise professional judgement and maintain professional scepticism throughout the audit. In doing so,

- ▲ I identify and assess the risks of material misstatement of financial statements whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- ▲ I obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal controls.
- ▲ I evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures.
- ▲ I conclude on the appropriateness of the use of the going concern basis of accounting and, based on the audit evidence obtained, on whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Environmental Protection Agency's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my report. However, future events or conditions may cause the Environmental Protection Agency to cease to continue as a going concern.
- ▲ I evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

### Information other than financial statements

My opinion on the financial statements does not cover the other information presented with those statements, and I do not express any form of assurance conclusion thereon.

In connection with my audit of financial statements, I am required under ISAs to read the other information presented and, in doing so, consider whether the other information is materially inconsistent with the financial statements or with knowledge obtained during the audit, or if it otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact.



## Reporting on other matters

My audit is conducted by reference to the special considerations which attach to State bodies in relation to their management and operation. I report if I identify material matters relating to the manner in which public business has been conducted.

I seek to obtain evidence about the regularity of financial transactions in the course of audit. I report if I identify any material instance where public money has not been applied for the purpose intended or where transactions did not conform to the authorities governing them.

I also report by exception if, in my opinion,

- ▲ I have not received all the information and explanations I required for my audit, or
- ▲ the accounting records were not sufficient to permit the financial statements to be readily and properly audited, or
- ▲ the financial statements are not in agreement with the accounting records.

## 7.4 STATEMENT OF INCOME AND EXPENDITURE AND RETAINED REVENUE RESERVES FOR THE YEAR ENDED 31 DECEMBER 2019

		2019	2018
	Note	€'000	€'000
<b>Income</b>			
Oireachtas Grants – DCCAE	2(a)	38,555	35,161
Environment Fund Grants	2(b)	9,205	9,004
Oireachtas Grants – DHPLG	2(c)	7,483	7,022
Emissions Trading Costs Recovered	3	1,486	1,292
Income from Radiological Activities	4	994	985
Licensing Activities	5	870	613
Enforcement Activities	6	9,701	9,268
Sundry Receipts	7	601	582
Net Deferred Retirement Benefit Funding	24(c)	8,894	8,782
<b>Total Income</b>		<b>77,789</b>	<b>72,709</b>
<b>Expenditure</b>			
Remuneration	8	25,586	24,358
Retirement Benefit Costs	24(a)	11,326	11,872
Travelling Expenses	9	1,903	1,932
Laboratory and Field Costs	10	1,512	1,601
Accommodation Costs	11	1,915	1,870
Administration Costs	12	9,289	8,733
Consultants	13	628	461
Grants, Contractors and External Service Providers	14	9,320	8,329
Environmental Research Programme Payments	15	8,541	9,351
Depreciation	16	5,562	5,723
<b>Total Expenditure</b>		<b>75,582</b>	<b>74,230</b>
<b>Surplus / (Deficit) for the Year before Appropriations</b>		<b>2,207</b>	<b>(1,521)</b>
Transfer from / (to) the Capital Account	17	(165)	(63)
Surplus on Disposals of Fixed Assets		49	37
<b>Surplus /(Deficit) for the Year after Appropriations</b>		<b>2,091</b>	<b>(1,547)</b>
Surplus at 1 January		1,571	3,118
<b>Surplus at 31 December</b>		<b>3,662</b>	<b>1,571</b>

All income and expenditure for the year relate to continuing activities at the reporting date.

The Statement of Cash Flows and notes 1 to 29 form part of these financial statements.

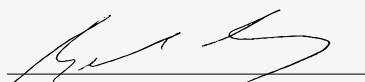
On behalf of the Board of the Environmental Protection Agency::



**Laura Burke**

Director General

Date: 30 June 2020



**Gerard O'Leary**

Deputy Director General

## 7.5 STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2019

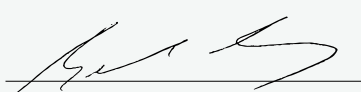
	<u>Note</u>	<u>2019</u> <u>€'000</u>	<u>2018</u> <u>€'000</u>
<b>Surplus / (Deficit) after appropriations</b>		<b>2,091</b>	<b>(1,547)</b>
Experience gains / (losses) on retirement benefit obligations	<b>24(d)</b>	7,264	(688)
Changes in assumptions underlying the present value of retirement benefit obligations		(30,277)	9,062
<b>Actuarial (Loss) / Gain in the year</b>		<b>(23,013)</b>	<b>8,374</b>
<b>Adjustment to deferred retirement benefits funding</b>		<b>23,013</b>	<b>(8,374)</b>
<b>Other Comprehensive Income for the year</b>		<b>2,091</b>	<b>(1,547)</b>

The Statement of Cash Flows and notes 1 to 29 form part of these financial statements.

On behalf of the Board of the Environmental Protection Agency:



**Laura Burke**  
Director General  
Date: 30 June 2020



**Gerard O'Leary**  
Deputy Director General



## 7.6 STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2019

	<b>Note</b>	<b>2019 €'000</b>	<b>2018 €'000</b>
<b>Fixed Assets - Property, Plant &amp; Equipment</b>	<b>19</b>	<b>38,476</b>	<b>38,311</b>
<b>Current Assets</b>			
Receivables	20	3,168	2,412
Cash and cash equivalents	21	8,887	7,442
		<b>12,055</b>	<b>9,854</b>
<b>Current Liabilities (amounts falling due within one year)</b>			
Payables	22	(8,399)	(8,289)
<b>Net Current Assets</b>		<b>3,656</b>	<b>1,565</b>
<b>Total Assets less Current Liabilities before Retirement Benefits</b>		<b>42,132</b>	<b>39,876</b>
<b>Retirement Benefits</b>			
Retirement benefit obligations	24(b)	(279,642)	(247,735)
Deferred retirement benefit funding asset	24(c)	279,642	247,735
		<b>0</b>	<b>0</b>
<b>Total Net Assets</b>		<b>42,132</b>	<b>39,876</b>
<b>Representing</b>			
<b>Capital account</b>	17	<b>38,470</b>	<b>38,305</b>
<b>Retained revenue reserves</b>		<b>3,662</b>	<b>1,571</b>
		<b>42,132</b>	<b>39,876</b>

The Statement of Cash Flows and notes 1 to 29 form part of these financial statements.

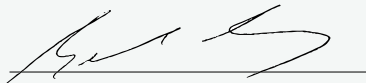
On behalf of the Board of the Environmental Protection Agency:



**Laura Burke**

Director General

Date: 30 June 2020



**Gerard O'Leary**

Deputy Director General

## 7.7 STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2019

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
<b>Net Cash Flows from Operating Activities</b>		
Surplus / (Deficit) of Income over Expenditure	2,091	(1,547)
Depreciation and Impairment of Fixed Assets	5,562	5,723
(Increase) in Receivables	(756)	(1,501)
Increase in Payables	110	32
Interest Paid	32	18
(Surplus) on Disposal of Fixed Assets	(49)	(37)
Transfer to Capital Account	165	63
<b>Net Cash Inflow from Operating Activities</b>	<b>7,155</b>	<b>2,751</b>
<b>Cash Flows from Investing Activities</b>		
Payments to acquire Property, Plant & Equipment	(5,728)	(5,791)
Proceeds on disposal of fixed assets	50	42
<b>Net Cash Flows from Investing Activities</b>	<b>(5,678)</b>	<b>(5,749)</b>
<b>Cash Flows from Financing Activities</b>		
Bank Interest Paid	(32)	(18)
<b>Net Cash Flows from Financing Activities</b>	<b>(32)</b>	<b>(18)</b>
<b>Net Increase / (Decrease) in Cash and Cash Equivalents</b>	<b>1,445</b>	<b>(3,016)</b>
Cash and Cash equivalents at 1 January	7,442	10,458
<b>Cash and Cash Equivalents at 31 December</b>	<b>8,887</b>	<b>7,442</b>

## 7.8 NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2019

### 1 Accounting Policies

The basis of accounting and significant accounting policies adopted by the Environmental Protection Agency are set out below. They have all been applied consistently throughout the year and for the preceding year.

#### a) General Information

The Environmental Protection Agency was set up under the Environmental Protection Agency Act, 1992, with its headquarters at Johnstown Castle Estate, County Wexford.

Primary Objectives - the description of EPA's operations and principal activities is set out in the Annual Report which accompanies these Financial Statements.

The Environmental Protection Agency is a Public Benefit Entity (PBE).

#### b) Statement of Compliance

The financial statements of the Environmental Protection Agency for the year ended 31 December 2019 have been prepared in accordance with FRS 102, the financial reporting standard applicable in the UK and Ireland issued by the Financial Reporting Council (FRC), as promulgated by Chartered Accountants Ireland.

#### c) Basis of Preparation

The financial statements have been prepared under the historic cost convention and in the form approved by the Minister for Communications, Climate Action and Environment, with the concurrence of the Minister for Public Expenditure and Reform under Section 50 of the Environmental Protection Agency Act, 1992. The following accounting policies have been applied consistently in dealing with items which are considered material.

#### d) Revenue

##### State Grants

Revenue is generally recognised on an accruals basis; one exception to this is in the case of State Grants which are recognised on a cash receipts basis.

##### Licensing Activity Income

Applicants for environmental licences are required to pay the full licence application fee at the time of making the application. The amounts received are apportioned to the Statement of Income and Expenditure and Retained Revenue Reserves on completion of the following stages of the licensing process:

Industrial Emissions Directive, Integrated Pollution Control and Waste Management Licences:

Application	30%
Proposed Determination	50%
Licence Issue	20%

Waste Water Discharge Licences:

Application	10%
Acknowledgement of complete application	40%
Licence Decision Issue	50%

Radiological Protection Licence fees are recognised as income in line with the duration of the licence. Fees received in advance are shown as income in advance.

##### Other Revenue

Other revenue is recognised on an accruals basis.

#### e) Emissions Trading Unit

The Emissions Trading Unit (ETU) was established within the Environmental Protection Agency in 2003. The costs of administering the emissions trading scheme are reimbursed to the EPA by the Department of Communications, Climate Action and Environment, from the proceeds of the sale of allowances, which are paid directly to the Department.

#### f) Research Grant Payments

The EPA enters into commitments in respect of research projects awarded for funding. Expenditure on these research projects is charged in the financial statements on the basis of the initial payments which are made on signing of the grant award, interim payments which may be made subject to satisfactory performance and further payments which are issued on receipt and verification of claims in respect of work completed. Costs incurred by the EPA in the implementation of the research programmes are charged to the financial statements as they are incurred.



**g) Property, Plant and Equipment**

Property, plant and equipment are stated at cost less accumulated depreciation, adjusted for any provision for impairment. Depreciation is provided on all property, plant and equipment at rates estimated to write off the cost less the estimated residual value of each asset on a straight-line basis over their estimated useful lives, as follows:

Buildings	2% per annum
Furniture and Fittings	10% per annum
Laboratory and Field Equipment	15% per annum
Equipment	20% per annum
IT and Computer Equipment	25% per annum
Motor Vehicles	20% per annum

Leasehold improvements are depreciated over the life of the lease.

Residual value represents the estimated amount which would currently be obtained from disposal of an asset, after deducting estimated costs of disposal, if the asset were already of an age and in the condition expected at the end of its useful life.

**h) Capitalisation of Internally Developed Software**

The external costs of software developed for internal use are capitalised where it can be separately identified as software for use by the Agency and where it is expected to convey business benefits for a number of future years. The salary costs of software development staff are also capitalised.

**i) Capital Funding**

The fixed assets of the EPA and advances to fund work in progress and asset purchases are met from a combination of capital grants, approved borrowing and allocations from current revenue. Funding sourced from grants (including that used to repay borrowings) is transferred to a capital account which is amortised in line with the depreciation of the related assets.

**j) Inventory**

All inventory, including consumables are written off in the year of purchase.

**k) Receivables**

Receivables are initially measured at transaction price and are subsequently carried at this amount, less a provision for doubtful debts. The provision for doubtful debts is established when there is objective evidence that the Environmental Protection Agency will not be able to collect all amounts owed to it. All movements in the provision for doubtful debts are recognised in the Statement of Income and Expenditure and Retained Revenue Reserves.

**l) Operating Leases**

Rental expenditure under operating leases is recognised in the Statement of Income and Expenditure and Retained Revenue Reserves over the life of the lease. Expenditure is recognised on a straight-line basis over the lease period, except where there are rental increases linked to the expected rate of inflation, in which case these increases are recognised when incurred. Any lease incentives received are recognised over the life of the lease.

**m) Employee Benefits**Short-term Benefits

Short-term benefits such as holiday pay are recognised in the year, and benefits that are accrued at year end are included in the Payables figure in the Statement of Financial Position.

Retirement Benefits

The Environmental Protection Agency previously established its own defined benefit pension schemes, which are funded annually on a pay-as-you-go basis from monies available to it, including monies provided by the Department of Communications, Climate Action and Environment and from contributions deducted from staff and members' salaries. The Environmental Protection Agency also operates the Single Public Services Pension Scheme (Single Scheme), which is a defined benefit scheme for pensionable public servants appointed on or after 1 January 2013. Single Scheme members' contributions are paid over to the Department of Public Expenditure and Reform (DPER).

Pension costs reflect pension benefits earned by employees and are shown net of staff pension contributions from employees where contributions are retained by the Agency. An amount corresponding to the pension charge is recognised as income to the extent that it is recoverable, and offset by grants received in the year to discharge pension payments.

Actuarial gains or losses arising on scheme liabilities are reflected in the Statement of Comprehensive Income, and a corresponding adjustment is recognised in the amount recoverable from the Department of Communications, Climate Action and Environment.

The financial statements reflect, at fair value, the assets and liabilities arising from the Environmental Protection Agency's pension obligations and any related funding, and recognises the costs of providing pension benefits in the accounting periods in which they are earned by employees. Retirement benefit scheme liabilities are measured on an actuarial basis using the projected unit credit method.

Pension liabilities represent the present value of future pension payments earned by staff to date. Deferred pension funding represents the corresponding asset to be recovered in future periods from the Department of Communications, Climate Action and Environment.

#### n) Loans

Loans are recognised initially at the transaction price (present value of cash payable, including transaction costs). Loans are subsequently stated at amortised cost. Interest expense is recognised on the basis of the effective interest method and is included in finance costs.

Loans are classified as current liabilities unless there is a right to defer settlement of the loan for at least 12 months from the reporting date.

#### o) Critical Accounting Judgements and Estimates

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the amounts reported for assets and liabilities as at the date of the Statement of Financial Position and the amounts reported for revenues and expenses during the year. However, the nature of estimation means that the actual outcomes could differ from those estimates. The following judgements have had the most significant effect on amounts recognised in the financial statements.

##### Retirement Benefit Obligation

The assumptions underlying the actuarial valuations for which the amounts recognised in the financial statements are determined (including discount rates, rates of increase in the future of compensation levels, mortality rates and healthcare cost trend rates) are updated annually based on current economic conditions, and for any relevant changes to the terms and conditions of the pension and post-retirement plans.

The assumptions can be affected by:

- (i) the discount rate, changes in the rate of return on high-quality corporate bonds.
- (ii) future compensation levels, future labour market conditions.

		<b>2019</b>	<b>2018</b>
		<b>€'000</b>	<b>€'000</b>
<b>2 State Grants</b>			
<b>Grants from the Department of Communications, Climate Action and Environment:</b>			
<b>(a) Oireachtas Grant – Grants from the Department's Vote:</b>			
Current	Subhead – F3	23,966	20,850
Capital	Subhead – F3	6,024	3,555
Research Capital	Subhead – F3	7,849	9,900
Other Programmes	Subhead – F3	716	856
<b>Total DCCAE Oireachtas Grants</b>		<b>38,555</b>	<b>35,161</b>
<b>(b) Environment Fund Grants</b>			
Non-Pay		1,412	4,600
Research		3,588	0
Other Programmes		4,205	4,404
<b>Total Environment Fund Grants</b>		<b>9,205</b>	<b>9,004</b>
<b>Grants from the Department of Housing, Planning and Local Government:</b>			
<b>(c) Oireachtas Grant – Grants from the Department's Vote:</b>			
Current	Subhead – B3	6,452	6,037
Capital	Subhead – B3	1,031	985
<b>Total DHPLG Oireachtas Grants</b>		<b>7,483</b>	<b>7,022</b>
<b>Total State Grants</b>		<b>55,243</b>	<b>51,187</b>

Research Funding of €10.437M (2018 €9.9M) provided by the Department of Communications, Climate Action and Environment are specific allocations to meet the cost of environmental research. €10.916M was expended on these research activities in 2019 (2018 €11.691M). See Note 15.

	2019	2018
	€'000	€'000
<b>3 Emissions Trading Unit (ETU) Activities</b>		
Costs of Emissions Trading Unit recovered from Auction Funds, etc.	1,486	1,292
<b>Total Funding of ETU Costs</b>	<b>1,486</b>	<b>1,292</b>

	2019	2018
	€'000	€'000
<b>4 Income from Radiological Activities</b>		
Calibration Service	29	29
Radon Measurement Service	0	77
Radiation Monitoring Service	314	276
Licence Fees	651	601
Miscellaneous / Contract Income	0	2
<b>Total Income from Radiological Services</b>	<b>994</b>	<b>985</b>

	2019	2018
	€'000	€'000
<b>5 Licensing Activities - IED &amp; IPC, Waste and WWD</b>		
Licence Fees prepaid at 1 January	1,351	1,150
Fees Received	976	815
Less Refunds Paid	(30)	(1)
Licence Fees prepaid at 31 December (see Note 22)	(1,427)	(1,351)
<b>Amount credited to the Statement of Income and Expenditure and Retained Revenue Reserves</b>	<b>870</b>	<b>613</b>

Licensing: Industrial Emissions Directive (IED), Integrated Pollution Control (IPC) and Waste

Under Section 83 of the Environmental Protection Agency Act, 1992 the EPA is responsible for the licensing of large/ complex industrial and other processes with significant polluting potential. Under Section 40 of the Waste Management Act, 1996 the EPA is responsible for the licensing of all significant waste recovery & disposal activities operated by local authorities and private enterprise.

Licensing: Waste Water Discharges (WWD)

The Waste Water Discharge (Authorisation) Regulations 2007 provide for the licensing of local authority waste water discharges. Discharges from areas that serve over 500 population equivalent require a licence from the EPA. Areas that serve less than 500 population equivalent are required to be certified by the EPA. The EPA's licensing income arises from fees charged in respect of processing such licensing applications.

	2019	2018
	€'000	€'000
<b>6 Enforcement Activities - IED &amp; IPC, Waste, WWD and Drinking Water</b>		
Enforcement Charges Invoiced	9,471	8,941
Enforcement Income from Prosecutions	230	327
<b>Total Income from Enforcement Activities</b>	<b>9,701</b>	<b>9,268</b>

Under Section 96 of the Environmental Protection Agency Act, 1992 the EPA is responsible for the regulation of large/ complex industrial and other processes with significant polluting potential. Under Section 15 of the Waste Management Act, 1996 the EPA is responsible for the regulation of all significant waste recovery and disposal activities operated by local authorities and private enterprise. Under the Waste Water Discharge (Authorisation) Regulations 2007 the EPA is responsible for the regulation of waste water discharges. Under the European Union (Drinking Water) Regulations 2014 the EPA may charge for monitoring the quality of water supplies intended for human consumption. The EPA's enforcement income arises from fees charged in respect of this enforcement work.

	2019	2018
	€'000	€'000
<b>7 Sundry Receipts</b>		
Sundry	601	582
	<b>601</b>	<b>582</b>



**8 Remuneration****(a) Aggregate Employee Benefits**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Staff short-term benefits	23,501	22,423
Termination benefits	0	0
Employer's contribution to social welfare PRSI	2,168	2,007
<b>Total Salary Costs</b>	<b>25,669</b>	<b>24,430</b>
IT Development Salary costs capitalised	(83)	(72)
<b>Salary Costs charged to the Statement of Income and Expenditure and Retained Revenue Reserves</b>	<b>25,586</b>	<b>24,358</b>

The total Salary cost of €25.67M includes an accrual of €736,000 (2018: €754,000) in respect of accumulated staff annual leave entitlements. €207,000 (2018: €142,000) of Single scheme members pension contributions has been deducted and paid over to the Department of Public Expenditure and Reform. The total number of Single Scheme members at year end was 126 (2018: 98). The Pension Related Deduction was replaced by the Additional Superannuation Contribution with effect from 1 January 2019. €997,000 of Additional Superannuation Contribution (2018: €1,084,000 of Pension Related deduction) has been deducted from staff and paid to the Department of Communications, Climate Action and Environment.

**(b) Analysis of staff by location:**

	<b>2019</b>	<b>2018</b>
Headquarters	168	159
Regional Inspectorate Castlebar	27	28
Regional Inspectorate Cork	57	51
Regional Inspectorate Dublin	124	129
Regional Inspectorate Kilkenny	24	25
Regional Inspectorate Monaghan	15	14
Regional Offices	5	4
	<b>420</b>	<b>410</b>

**(c) Analysis of staff salary costs in excess of €60,000:**

The number of employees whose employee benefits fell within each band of €10,000 from €60,000 upwards is as follows:

	<b>2019</b>	<b>2018</b>
€60,000 to €70,000	81	70
€70,000 to €80,000	45	35
€80,000 to €90,000	31	28
€90,000 to €100,000	4	5
€100,000 to €110,000	6	5
€110,000 to €120,000	0	1
€120,000 to €130,000	0	0
€130,000 to €140,000	4	5
€140,000 to €150,000	1	1
€150,000 to €160,000	0	0
€160,000 to €170,000	1	1

The total number of staff employed (WTE) at year end was 407.7 (2018: 391).

**(d) Staff Short-Term Benefits**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Basic Pay	23,438	22,354
Overtime	0	0
Allowances	63	69
	<b>23,501</b>	<b>22,423</b>

**(e) Key Management personnel**

Key management personnel in the Environmental Protection Agency consists of the Director General and the 5 members of the Board of Directors. The Directors of the Environmental Protection Agency are full time executive Directors. They are paid an inclusive salary and consequently no Directors or Board fees are paid. The total value of employee benefits for key management personnel is set out below:

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Salary	849	824
Allowances	11	11
	<b>860</b>	<b>835</b>

This does not include the value of retirement benefits earned in the period. The key management personnel are members of the Environmental Protection Agency (Director General and Director) staff pension scheme and their entitlements in that regard do not extend beyond the terms of the model public service pension scheme.

**(f) Director General Salary and Benefits**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
The Director General remuneration package for the financial period was as follows:		
Salary	<b>168</b>	<b>162</b>

This does not include the value of retirement benefits earned in the period. The Director General is a member of the Environmental Protection Agency (Director General and Director) staff pension scheme and her entitlements in that regard do not extend beyond the terms of the model public service pension scheme.

**9 Travelling Expenses**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Travel and Subsistence	1,777	1,807
Motor Vehicle Expenses	149	141
Travel Refunds	(23)	(16)
	<b>1,903</b>	<b>1,932</b>

This includes Executive Board travel expenditure of €84,469 (2018 €89,921).

**10 Laboratory and Field Costs**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Laboratory and Field Expenses	1,011	1,053
Equipment Repairs and Maintenance	447	499
Protective Clothing	54	49
	<b>1,512</b>	<b>1,601</b>

**11 Accommodation Costs**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Rent and Rates	730	683
Power, Light and Heat, Cleaning	598	682
Repairs, Maintenance, Security	587	505
	<b>1,915</b>	<b>1,870</b>

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
<b>12 Administration Costs</b>		
Telephone and Postage	372	462
Printing of Publications and Stationery Supplies	365	318
Insurance	177	169
Computer and Data Processing Charges	3,934	3,692
Audit Fees	29	25
Corporate Governance and Internal Audit Costs	91	58
Legal fees, advice and related costs	1,486	1,377
Meeting, External Committee and Guest Speaker Expenses	413	408
Staff Appointment and other related costs	190	128
Bank Interest and Charges	47	23
Books, Periodicals, and Library	65	92
Staff Development and Training Costs	642	563
Advertising	142	71
Communications	1,101	1,235
Sundries	235	112
	<b>9,289</b>	<b>8,733</b>

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
<b>13 Consultancy Costs</b>		
Consultants	628	461
	<b>628</b>	<b>461</b>

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
The EPA Offices which made use of these consultancies were:		
Office of Communications and Corporate Services	175	193
Office of Environmental Sustainability	0	4
Office of Evidence and Assessment	222	47
Office of Radiation Protection and Environmental Monitoring	104	53
Office of the Director General / Cross Office	127	164
	<b>628</b>	<b>461</b>

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
<b>14 Grants, Contractors and External Service Providers</b>		
Contractors and External Service Providers	7,604	6,509
Grants	1,716	1,820
	<b>9,320</b>	<b>8,329</b>



	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
The EPA Offices which incurred costs under this heading were:		
Office of Communications and Corporate Services	671	527
Office of Environmental Sustainability	2,684	2,612
Office of Evidence and Assessment	4,478	3,993
Office of Environmental Enforcement	861	788
Office of Radiation Protection and Environmental Monitoring	626	409
	<b>9,320</b>	<b>8,329</b>

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
<b>15 Environmental Research</b>		
EPA Research Programme Grant Payments	9,272	10,376
EPA Research Programme Grant Refunds	(69)	(29)
Co-Funding Research Income	(662)	(996)
<b>Research Programme Payments</b>	<b>8,541</b>	<b>9,351</b>

The current EPA environmental research programme was launched in 2014. It is being funded through a combination of Exchequer, Environment Fund and other Co-Funding sources. The research programme aims to fund research that will address key environmental management issues, which will ultimately protect and improve the natural environment.

<b>Research Co - Funding</b>	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
In addition to the funding provided by DCCAE, the following research co-funding was received:		
WEEE Ireland	83	83
Geological Survey of Ireland	0	25
Agence Nationale de la Recherche	0	338
Health Service Executive	43	0
Department of Agriculture, Food and the Marine	122	0
Sustainable Energy Authority of Ireland	44	0
REPAK	20	0
The Office of Public Works	15	88
National Parks and Wildlife Service	61	0
Met Eireann	15	41
The Marine Institute	58	211
Direction Regionale des Finance Publiques d'Ile-de-France et de Paris	0	100
AXIS	33	0
WW2015	38	0
Bundeeskasse Halle/Saale - Concert	0	31
Department of Transport, Tourism and Sport	50	15
Southern Waste Region	0	20
Sundry / Other	80	44
<b>Total Co - Funding</b>	<b>662</b>	<b>996</b>

In 2019 EPA Research Programme expenditure was €10.916M including Grant Payments of €9.272M as shown above and implementation and activity costs of €1,644K which are reported under the Travel, Lab and Field, Administration and Contractors cost headings.

In 2018 EPA Research Programme expenditure was €11.691M including Grant Payments of €10.347M as shown above and implementation and activity costs of €1,344K, which are reported under the Travel, Lab and Field, Administration and Contractors cost headings.

A further €274K of grant payments (2018 €1,344K) to research projects is included in the Grants figure at Note 14.

At 31 December 2019 commitments entered into but not yet charged to the financial statements in respect of Research projects amounted to €27.551M (2018 - €28.187M) with the following breakdown:

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Outstanding Grant Commitments at 1 January	28,187	24,019
Grants Approved during the year	9,887	15,219
Grants Decommitted during the year	(1,046)	(513)
Grant Payments made in the year	(9,546)	(10,567)
Refunds of Grant payments received in the year	69	29
<b>Outstanding Commitments at 31 December</b>	<b>27,551</b>	<b>28,187</b>

These figures exclude EPA implementation costs in respect of Research programmes.

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
<b>16 Depreciation of Fixed Assets</b>		
Depreciation of Property, Plant and Equipment (Note 19)	5,562	5,723
	<b>5,562</b>	<b>5,723</b>

### **17 Capital Account**

	<b>€'000</b>	<b>€'000</b>
At 1 January 2019		38,305
Transfer from Income and Expenditure Account :		
Income Allocated for Capital purposes - Fixed Asset Additions	5,728	
<b>Less:</b>		
Disposals	(513)	
Less prior depreciation on disposals	512	
	(1)	
Depreciation charge for year	(5,562)	
Net Transfer from Income and Expenditure Account		165
<b>At 31 December 2019</b>		<b>38,470</b>

At 31 December 2019 the Capital Account balance includes €15,662 (2018 - €15,662) in respect of prepayments for fixed assets (see Note 20 - Receivables).

### **18 Taxation**

The EPA is specifically exempted under the provisions of Section 32, and Schedule 2, of Finance Act, 1994. Accordingly, no taxation charges have been included in the accounts.

**19 Fixed Assets - Property, Plant & Equipment**

	<b>Total</b>	<b>Buildings</b>	<b>Furniture &amp; Fittings</b>	<b>IT &amp; IS Equipment</b>	<b>Lab &amp; Field Equipment</b>	<b>Motor Vehicles</b>
<b>Cost</b>	<b>€'000</b>	<b>€'000</b>	<b>€'000</b>	<b>€'000</b>	<b>€'000</b>	<b>€'000</b>
At 1 January 2019	<b>82,232</b>	<b>42,274</b>	<b>4,523</b>	<b>23,027</b>	<b>11,191</b>	<b>1,217</b>
Additions	5,728	1,130	660	2,762	1,051	125
Disposals	(513)	0	(2)	(150)	(321)	(40)
<b>At 31 December 2019</b>	<b>87,447</b>	<b>43,404</b>	<b>5,181</b>	<b>25,639</b>	<b>11,921</b>	<b>1,302</b>
<b>Depreciation</b>						
At 1 January 2019	<b>43,921</b>	<b>13,547</b>	<b>3,196</b>	<b>17,998</b>	<b>8,238</b>	<b>942</b>
Charge for Year	5,562	836	511	3,159	925	131
On Disposals	(512)	0	(1)	(148)	(323)	(40)
<b>At 31 December 2019</b>	<b>48,971</b>	<b>14,383</b>	<b>3,706</b>	<b>21,009</b>	<b>8,840</b>	<b>1,033</b>
<b>Net Book Value</b>						
<b>At 31 December 2019</b>	<b>38,476</b>	<b>29,021</b>	<b>1,475</b>	<b>4,630</b>	<b>3,081</b>	<b>269</b>
<b>At 31 December 2018</b>	<b>38,311</b>	<b>28,727</b>	<b>1,327</b>	<b>5,029</b>	<b>2,953</b>	<b>275</b>

Headquarters for the Environmental Protection Agency were built on the grounds of Johnstown Castle Estate, County Wexford, on a site whose title is vested in Teagasc. In 2013 the EPA finalised a long - term lease of this site from Teagasc. The EPA headquarters building was constructed by the Office of Public Works (OPW) who financed the construction by means of a commercial loan. The EPA funds the annual repayments made by the OPW. The interest element of the repayments met by the EPA is accounted for in the year it arises. Both the asset and the associated funding arrangements have been recorded in the books of the EPA to reflect the substance of the underlying transactions – see Note 23.

The EPA regional inspectorate building at Seville Lodge, Kilkenny was constructed by the OPW on a site acquired for EPA. The legal transfer of the site to the EPA is being processed by the OPW through the Chief State Solicitors Office.

In 2019 the EPA capitalised €2.229M (2018 - €2.59M) in respect of the external cost and €83K (2018 - €72K) in respect of the internal salary cost of software development for internal use. This is in line with our Accounting Policy for Capitalisation of Internally Developed Software.

	<b>2019</b>	<b>2018</b>
<b>20 Receivables</b>	<b>€'000</b>	<b>€'000</b>
Debtors	1,888	1,433
Prepayments	1,264	963
Prepayments for Fixed Assets	16	16
	<b>3,168</b>	<b>2,412</b>

All debtors fall due within one year.

	<b>2019</b>	<b>2018</b>
<b>21 Cash and cash equivalents</b>	<b>€'000</b>	<b>€'000</b>
Cash and Bank Balances	<b>8,887</b>	<b>7,442</b>



**22 Payables**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Amounts falling due within one year:		
Licence Fees Pre-Paid	1,427	1,351
Radiological Protection Licence Fees Prepaid	3	219
Other Deferred Income	109	246
ETU Funds on Hands	0	2
Trade and Other Expenses	6,837	6,448
Amounts due to OPW in relation to loan repayments (Note 23).	23	23
	<b>8,399</b>	<b>8,289</b>

Included in Trade and Other Expense above are the following amounts due to the Revenue Commissioners:

Professional Service Withholding Tax	317	328
PAYE/PRSI/USC	705	667
VAT	320	180
Relevant Contract Tax	16	1
	<b>1,358</b>	<b>1,176</b>

**23 Borrowings**

The EPA headquarters building in Wexford was constructed by the Office of Public Works (OPW) who financed the construction by means of a 20-year commercial loan. The EPA funds the annual repayments made by the OPW. Both the asset and the associated borrowings are recorded in the books of the EPA to reflect the substance of the underlying transactions.

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Repayable within one year	<b>23</b>	<b>23</b>

**24 Retirement Benefit Costs****(a) Analysis of total retirement benefit costs charged to the Statement of Income and Expenditure and Retained Revenue Reserves**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Current Service Cost	7,867	8,346
Interest on retirement benefit scheme liabilities	4,670	4,708
Employee Contributions	(1,211)	(1,182)
	<b>11,326</b>	<b>11,872</b>

**(b) Movement in net retirement benefit obligations during the financial year**

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Net retirement benefit obligation at 1 January	247,735	247,327
Current service costs	7,867	8,346
Interest costs	4,670	4,708
Actuarial (gain) / loss	23,013	(8,374)
Pensions paid in the year	(3,643)	(4,272)
<b>Net retirement benefit obligation at 31 December</b>	<b>279,642</b>	<b>247,735</b>

**(c) Deferred Funding for Retirement Benefits**

The EPA recognises these amounts as an asset corresponding to the unfunded deferred liability for retirement benefits on the basis of the set of assumptions described below and a number of past events. These events include the statutory basis for the establishment of the retirement benefit schemes, and the policy and practice currently in place in relation to funding public service pensions including contributions by employees and the annual estimates process. The EPA has no evidence that this funding policy will not continue to meet such sums in accordance with current practice.

The net deferred funding for retirement benefits recognised in the Statement of Income and Expenditure and Retained Revenue Reserves was as follows:

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Funding recoverable in respect of current year retirement benefit costs	12,537	13,054
Resources applied to pay retirement benefits	(3,643)	(4,272)
	<b>8,894</b>	<b>8,782</b>

The deferred funding asset for retirement benefits at 31 December 2019 amounted to €279.642M (2018 €247.735M).

**(d) History of defined benefit obligations**

	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>€ M</b>	<b>€ M</b>	<b>€ M</b>	<b>€ M</b>	<b>€ M</b>
Defined benefit obligations	280	248	247	231	182
Experience gains / (losses) on defined benefit scheme liabilities:					
Amount (€ M)	7.264	(0.688)	(6.240)	(3.092)	3.308
Percentage of Scheme Liabilities	2.6%	(0.3%)	(2.5%)	(1.3%)	1.8%

The cumulative actuarial loss recognised in the Statement of Total Recognised Gains and Losses amounts to €118.973M (2018 €95.96M)

**(e) General Description of the Schemes**

The schemes are defined benefit final salary pension arrangements with benefits and contributions defined by reference to current "model" public sector scheme regulations. The schemes provide staff members with a pension (being 1/80 per year of service), a gratuity or lump sum (being 3/80 per year of service) and spouse's and children's pensions. Normal Retirement Age is a member's 65th birthday, and pre-2004 members have an entitlement to retire without actuarial reduction from age 60. The schemes provide Board members with a pension (being 1/48 per year of service), a gratuity or lump sum (being 1/32 per year of service) and spouse's and children's pensions. Board members are entitled to retire when their contract ends. Pensions in payment (and deferment) normally increase in line with general public sector salary inflation.

The valuation used for FRS 102 disclosures has been based on a full actuarial valuation performed on 1 March 2020 by a qualified independent actuary, taking account of the requirements of the FRS in order to assess the scheme liabilities at 31 December 2019.

The principal actuarial assumptions were as follows:

	<b>2019</b>	<b>2018</b>
Future salary increases	2.45%	2.70%
Future retirement benefit increases	1.95%	2.20%
Future state pension increases	1.45%	1.70%
Discount rate	1.15%	1.90%
Future inflation	1.45%	1.70%
Revaluation in deferment	1.95%	2.20%

**Mortality**

Mortality Pre-Retirement - Male: 62% of PNML00, Female 70% of PNFL00.

Mortality Post Retirement - Male: 58% of ILT15, Female 62% of ILT15.

The mortality basis adopted explicitly allows for improvements in life expectancy over time, so that life expectancy at retirement will depend on the year in which a member attains retirement age. The table below shows the life expectancy for members attaining age 65 in 2019 and 2039.

<b>Year of attaining age 65</b>	<b>2019</b>	<b>2039</b>
Life expectancy - male	<b>86.5</b>	<b>88.9</b>
Life expectancy - female	<b>89.0</b>	<b>91.0</b>

## **25 Lease Commitments**

At 31 December 2019 the Environmental Protection Agency had the following future minimum lease payments under non - cancellable operating leases for each of the following periods:

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Payable within one year	<b>722</b>	<b>721</b>
Payable within two to five years	<b>2,293</b>	<b>2,316</b>
Payable after five years	<b>2,978</b>	<b>3,393</b>

Operating lease payments recognised as an expense were €722K, (2018 €671K).

## **26 Related Party Disclosures**

The EPA has adopted procedures to govern its decision making in accordance with the Environmental Protection Agency Act, 1992 and the Ethics in Public Office Act, 1995 and regulations made thereunder. These procedures have been adhered to by the EPA during the year.

Key management personnel in the EPA consist of the Director General and the members of the Board of Directors. Total compensation paid to key management personnel, including Directors salaries, vouched expenses and the Director General's remuneration amounted to €944K (2018 €925K).

In the normal course of business the Agency may approve grants and may also enter into other contractual arrangements with undertakings in which EPA Key management personnel have an interest.

The following transactions were carried out with related parties:

	<b>2019</b>	<b>2018</b>
	<b>€'000</b>	<b>€'000</b>
Purchase of Goods and Services:		
Other Related Parties	38	24
	<b>38</b>	<b>24</b>

Payable to related parties:

	<b>€'000</b>	<b>€'000</b>
Other Related Parties	5	5
	<b>5</b>	<b>5</b>

The payables arise from purchase transactions.

In cases of potential conflict of interest, Board members absent themselves and do not participate in discussions regarding these matters.

## **27 Events after the reporting date**

Since the reporting date, the COVID-19 outbreak has developed rapidly and the scale of the potential impact is emerging. As the COVID-19 situation continues to evolve, EPA is monitoring developments closely, looking to mitigate the risk that it may have on the Agency's employees and stakeholders. EPA has established a Pandemic Response Team to advise the Board and manage the Agency's response to COVID-19. A Coronavirus contingency plan has been developed setting out a number of actions to protect the safety, health and welfare of EPA staff, contractors, customers and stakeholders while also seeking to limit the disruption to the EPA's work.

EPA's activities are included in the list of essential services in Schedule 2 of SI No. 121/2020 and the work of EPA has continued during the lockdown. It is too early to fully assess the impact of the outbreak on the operational and financial performance of the Agency at this time, but the Agency does not believe that COVID-19 will impact on its ability to continue to operate as a going concern.

## **28 Comparative Figures**

Some changes have been made to the presentation of items in the financial statements and the comparative figures have been reclassified where necessary on a basis consistent with the current year presentation.

## **29 Approval of Financial Statements**

The Financial Statements were approved by the Board of Directors on 30 June 2020.





# AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an GCC freagrach as an gcomhshaol a chosaint agus a fheabhsú, mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

## Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

**Rialáil:** *Rialáil agus córais chomhlíonta comhshaoil éifeachtacha a chur i bhfeidhm, chun dea-thorthaí comhshaoil a bhaint amach agus díriú orthu siúd nach mbíonn ag cloí leo.*

**Eolas:** *Sonraí, eolas agus measúnú ardchaighdeán, spriocdhírthe agus tráthúil a chur ar fáil i leith an chomhshaoil chun bonn eolais a chur faoin gcinnteoireacht.*

**Abhcóideacht:** *Ag obair le daoine eile ar son timpeallachta glaine, táirgiúla agus dea-chosanta agus ar son cleachtas inbhuanaithe i dtaobh an chomhshaoil.*

## I measc ár gcuid freagrachtaí tá:

### Ceadúnú

- Gníomhaíochtaí tionscail, dramhaíola agus stórála peitрил ar scála mór;
- Sceitheadh fuíolluisce uirbhig;
- Úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe;
- Foinsí radaíochta ianúcháin;
- Astaíochtaí gás ceaptha teasa ó thionscal agus ón eitlíocht trí Scéim an AE um Thrádáil Astaíochtaí.

### Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Iníúchadh agus cigireacht ar shaoráidí a bhfuil ceadúnas acu ón GCC;
- Cur i bhfeidhm an dea-chleachtais a stiúradh i ngníomhaíochtaí agus i saoráidí rialáilte;
- Maoirseacht a dhéanamh ar fhreagrachtaí an údaráis áitiúil as cosaint an chomhshaoil;
- Caighdeán an uisce óil phoiblí a rialáil agus údaruithe um sceitheadh fuíolluisce uirbhig a fhorfheidhmiú
- Caighdeán an uisce óil phoiblí agus phríobháidigh a mheasúnú agus tuairisciú air;
- Comhordú a dhéanamh ar líonra d'eagraíochtaí seirbhíse poiblí chun tacú le gníomhú i gcoinne coireachta comhshaoil;
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

### Bainistíocht Dramhaíola agus Ceimiceáin sa Chomhshaol

- Rialacháin dramhaíola a chur i bhfeidhm agus a fhorfheidhmiú lena n-áirítear saincheisteanna forfheidhmithe náisiúnta;
- Staitisticí dramhaíola náisiúnta a ullmhú agus a fhoilsiú chomh maith leis an bPlean Náisiúnta um Bainistíocht Dramhaíola Guaisí;
- An Clár Náisiúnta um Chosc Dramhaíola a fhorbairt agus a chur i bhfeidhm;
- Reachtaíocht ar rialú ceimiceán sa timpeallacht a chur i bhfeidhm agus tuairisciú ar an reachtaíocht sin.

### Bainistíocht Uisce

- Plé le struchtúir náisiúnta agus réigiúnacha rialachais agus oibriúcháin chun an Chreat-treoir Uisce a chur i bhfeidhm;
- Monatóireacht, measúnú agus tuairisciú a dhéanamh ar chaighdeán aibhneacha, lochanna, uiscí idirchreasa agus cósta, uiscí snámha agus screamhuisce chomh maith le tomhas ar leibhéil uisce agus sreabhadh abhann.

### Eolaíocht Aeráide & Athrú Aeráide

- Fardail agus réamh-mheastacháin a fhoilsiú um astaíochtaí gás ceaptha teasa na hÉireann;
- Rúnaíocht a chur ar fáil don Chomhairle Chomhairleach ar Athrú Aeráide agus tacaíocht a thabhairt don Idirphlé Náisiúnta ar

Ghníomhú ar son na hAeráide;

- Tacú le gníomhaíochtaí forbartha Náisiúnta, AE agus NA um Eolaíocht agus Beartas Aeráide.

### Monatóireacht & Measúnú ar an gComhshaol

- Córais náisiúnta um monatóireacht an chomhshaoil a cheapadh agus a chur i bhfeidhm: teicneolaíocht, bainistíocht sonraí, anailís agus réamhaisnéisiú;
- Tuairiscí ar Staid Thimpeallacht na hÉireann agus ar Tháscairí a chur ar fáil;
- Monatóireacht a dhéanamh ar chaighdeán an aeir agus Treoir an AE i leith Aeir Ghlain don Eoraip a chur i bhfeidhm chomh maith leis an gCoinbhinsiún ar Aerthruailliú Fadraoin Trasteorann, agus an Treoir i leith na Teorann Náisiúnta Astaíochtaí;
- Maoirseacht a dhéanamh ar chur i bhfeidhm na Treorach i leith Torainn Timpeallachta;
- Measúnú a dhéanamh ar thionchar pleananna agus clár beartaithe ar chomhshaol na hÉireann.

### Taighde agus Forbairt Comhshaoil

- Comhordú a dhéanamh ar ghníomhaíochtaí taighde comhshaoil agus iad a mhaoiniú chun brú a aithint, bonn eolais a chur faoin mbeartas agus réitigh a chur ar fáil;
- Comhoibriú le gníomhaíocht náisiúnta agus AE um thaighde comhshaoil.

### Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta agus nochtadh an phobail do radaíocht ianúcháin agus do réimsí leictreamaighnéadacha a mheas;
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha;
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta;
- Sainseirbhísí um chosaint ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

### Treoir, Ardú Feasachta agus Faisnéis Inrochtana

- Tuairisciú, comhairle agus treoir neamhspleách, fianaise-bhunaithe a chur ar fáil don Rialtas, don tionscal agus don phobal ar ábhair maidir le cosaint comhshaoil agus raideolaíoch;
- An nasc idir sláinte agus folláine, an geilleagar agus timpeallacht ghlan a chur chun cinn;
- Feasacht comhshaoil a chur chun cinn lena n-áirítear tacú le hiompraíocht um éifeachtúlacht acmhainní agus aistriú aeráide;
- Tástáil radóin a chur chun cinn i dtithe agus in ionaid oibre agus feabhsúchán a mholadh áit is gá.

### Compháirtíocht agus líonrú

- Oibriú le gníomhaireachtaí idirnáisiúnta agus náisiúnta, údaráis réigiúnacha agus áitiúla, eagraíochtaí neamhrialtais, comhlachtaí ionadaíocha agus ranna rialtais chun cosaint comhshaoil agus raideolaíoch a chur ar fáil, chomh maith le taighde, comhordú agus cinnteoireacht bunaithe ar an eolaíocht.

### Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

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

- An Oifig um Inbhunaitheacht i leith Cúrsaí Comhshaoil
- An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint ar Radaíocht agus Monatóireacht Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tugann coistí comhairleacha cabhair don Ghníomhaireacht agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.



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