

Key Statistics – 2022 in Numbers

Authorisations

environmental authorisations issued

122

by-product notifications processed

authorisation amendments completed

decisions on end-ofwaste criteria issued

radiation authorisations and 587 technical amendments issued

Enforcement

urban wastewater and 104 drinking water site visits

drinking water Directions issued to Uisce Éireann

visits to industrial, waste, dumping at sea and Volatile Organic Compounds facilities

District Court prosecutions concluded

inspections of radiological licensees

sites on the National **Priority Sites for Enforcement**

Research

Research reports: 8 Climate, 7 Natural Environment, 7 Healthy Environment, and 6 Green and Circular Economy

Radon

500,000+

pageviews of radon-related content

Circular Economy

€597k

awarded to seven enterprises under the Green Enterprise: Innovation for a Circular Economy funding call 73%

of adults heard information on food waste

Information

909,500

visits to www.epa.ie

82,000+

social media followers (some overlap between channels) 2,047

environmental queries from the public

8,600+

environmental complaints reported

137

information requests (79 AIE and 58 FOI) 409

EPA datasets uploaded to data.gov.ie (90,417 total views)

Monitoring

2,060

water bodies monitored for biological and chemical analysis 105

ambient air quality monitoring stations

528

samples analysed for radioactivity

Emergency Preparedness

1

National Nuclear Exercise involving 23 Government Departments and Agencies 5

international nuclear/radiological emergency exercises

INTRODUCTION



"The EPA has established itself as a trusted and respected body for environmental and radiological protection that is recognised for its scientific integrity". These are the words used by the Organisation for Economic Co-operation and Development (OECD) following their assessment of the EPA in 2020.

Our resilience as an organisation was put to the test during the unprecedented Covid-19 pandemic and we are proud of our staff for the way they responded to the challenge. Despite significant challenges, the essential work of the EPA to protect the environment continued. All of this was achieved by being extraordinarily innovative and adapting quickly to new ways of working. With the lifting of Covid-19 restrictions, 2022 was a year of learning from this unique period of adaptation as we transitioned back to the workplace. Building on these learnings, the EPA actively engaged with staff in developing a blended working policy, which combines both flexibility and connectedness, and balances blended working with in-person collaboration, to support the continued delivery of the important work of the EPA.

In May, the EPA published our Strategic Plan 2022–2026, to drive delivery of our three core roles: as an environmental regulator; as a key source of trusted scientific evidence and knowledge; and as a voice for the environment through our leadership, advocacy, collaboration and partnerships.

The EPA is approaching three decades of delivering environmental protection. While a lot has been achieved, the outlook for Ireland's environment is not optimistic unless we accelerate the implementation of solutions across all sectors and society.

The EPA's vision is that we live sustainably in a healthy environment that is valued and protected by all, and there is good evidence that people in Ireland place a particularly high value on having a clean, healthy environment. But we must do more than express our convictions and aspirations. We must quickly back our values up with actions, at every level – from Government to households and individuals, and across each and every business, sector, and community.



Laura Burke Director General, EPA

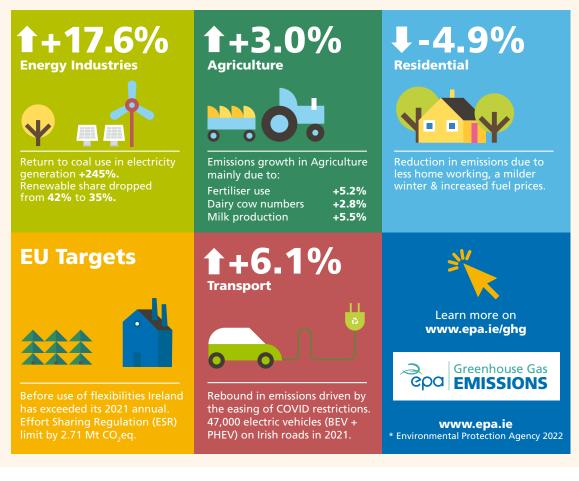
du Jenl.

CLIMATE CHANGE

The EPA's role in addressing climate change challenges include preparing Ireland's greenhouse gas inventories and projections; regulating emissions from industrial sectors; supporting climate science research; supporting behavioural change and facilitating the National Dialogue on Climate Action.

Provisional greenhouse gas inventory data for 2021, published in July, showed an increase in emissions of 4.7% between 2020 and 2021, with emissions above 2019 pre-Covid restriction levels. The increase in emissions is attributed to the Energy Industries sector due to a tripling of coal and oil use in electricity generation in 2021. Increases were also seen in the agriculture and transport sectors. The data showed the scale of change needed within and across all

sectors of Ireland's economy to make sustained progress in reversing this trend and to meet our EU commitments, and National carbon budget and sectoral ceiling targets. The fact that 23.5% of the carbon budget for the first carbon budget period (2021-2025) had already been used up in 2021, places additional pressure on emissions reductions required in the subsequent years and implementation of effective measures will need to be swiftly stepped up.



Ireland's Provisional Greenhouse Gas Emissions 1990-2021

JAN

Investigating the long-term impacts of everyday decisions in second-level schools' competition.



FEB

The quality of drinking water in private water supplies is not as good as it should be and is putting health at risk.





MAR

Several targeted enforcement campaigns carried out.

1,000 Dublin citizen scientists measure pollution from traffic.



The EPA published the audience segmentation analysis from the Climate Change in the Irish Mind project in November: Climate Change's Four Irelands: An Audience Segmentation Analysis.

This work was undertaken by the EPA and the Yale University Program on Climate Change Communication. As a baseline study, it aims to develop a better understanding of the Irish public's beliefs, risk perceptions, policy preferences and behaviours regarding climate change. The findings

Climate Change's Four Irelands:
An Audience Segmentation Analysis

showed that an overwhelming majority of the Irish public (85%) are either alarmed or concerned about climate change, that they feel personally affected by it and want to see real change. The majority of the public have high levels of awareness, are informed and understand the implications of a changing climate. They see that opportunities exist for jobs, innovation and wellbeing in taking climate action.

The EPA supported international climate science development and represented Ireland at two plenary meetings of the UN's Intergovernmental Panel on Climate Change (IPCC), during February and March, in which major assessments on climate adaptation and mitigation were completed. These assessments were important inputs to the work of the UN Framework Convention on Climate Change (UNFCCC) meetings later in 2022. The EPA, as members of the national delegation and the EU Team, provided expert support for negotiations at these meetings including at the COP27.

The EPA funds and coordinates Climate Research in Ireland and published the fourth annual report on climate research activity in Ireland in 2022. In total, the EPA funded €7.4 million of climate-related research in 2022 (across all funding schemes). A national assessment of climate research in Ireland (the five-year assessment) is in preparation – with support from Science Foundation Ireland, Sustainable Energy Authority Ireland and the Department of Transport. This work will provide an opportunity to deliver a comprehensive, Ireland-focused state-of-the-art understanding of climate change, the options to respond and the opportunities that may arise.

Following a Government decision in July, Ireland joined the European Integrated Carbon Observation System (ICOS) Research Infrastructure, aligning a range of measurements of greenhouse gases at key sites in Ireland with similar sites around Europe. Once verified, these analyses will complement the official data provided in future National Inventory reports.





APR

Ireland's power generation and industrial emissions increase by 15% in 2021.



APR

Low use of green criteria in public procurement by Government Departments. Climate Change Lecture



APR

€11.7 million funding for environmental research.

ENVIRONMENT AND HEALTH

Human health and wellbeing are closely linked to the state of our environment with threats such as pollution, noise, radiation and chemicals having a direct influence. EPA surveys have consistently shown that the vast majority of people in Ireland feel that it is important for them to have access to a clean and healthy environment with green and blue spaces.

Air Quality

The EPA's National Ambient Air Quality Monitoring Programme provides real-time localised air quality information linked to public health advice. With the addition of eight new stations in 2022, real-time air quality monitoring has more than trebled in Ireland since implementation of the programme began at the end of 2017. The national network will be completed in early 2023. The EPA now has 105 ambient air monitoring stations installed across the country. The Air Quality in Ireland Report 2021 highlighted two key air quality issues: particulate matter from solid fuel combustion and nitrogen dioxide from traffic emissions.

The EPA LIFE Emerald project progressed in 2022 and, over the next two years, will deliver a national forecast – to provide ambient air quality for all areas between monitoring stations – and historic national air quality maps.



Radiation

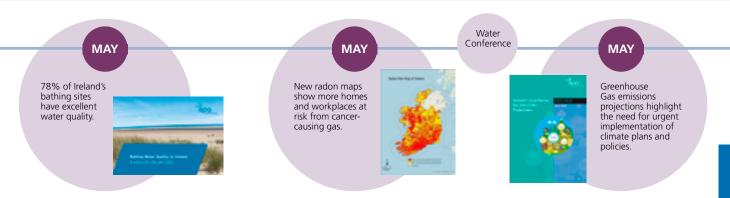
The EPA maintains a National Radiation Monitoring Network (NRMN) to constantly monitor radiation levels in the environment and to raise an alert if elevated gamma dose rates are detected. In 2022, the EPA made significant progress in upgrading the NRMN with new instrumentation deployed and additional monitoring sites added. The upgraded network will be completed in 2023.



Page 7

During 2022, the EPA monitored the evolving nuclear safety situation at nuclear facilities in Ukraine. In particular, the occupation of the Zaporizhzhya Nuclear Power Plant and events around the Chornobyl Exclusion Zone. The EPA liaised with relevant government departments and agencies and continues to keep them updated on nuclear safety matters in Ukraine, including any information coming to the EPA from international notification systems. In addition, the EPA has ensured the level of preparedness within the organisation is sufficient to respond if a nuclear emergency were to occur in Ukraine.

Radioactivity analysis of major drinking water supplies, food, air, marine and the terrestrial environment showed that the radiation dose does not constitute a significant health risk and remains stable in relation to previous years.



Radon Gas

New radon risk maps for Ireland were launched at the National Radon Forum in May. The maps are a significant milestone in the implementation of the National Radon Control Strategy and update the national risk assessment for radon. It is now predicted that some 170,000 homes have radon concentrations above the national reference level. This is an increase of 45,000 homes since the previous estimate made in 2002.

The publication of the maps resulted in an unprecedented 80,000 visits to the website in the days following the launch, compared to an average of 3,000 visits per month before launch.

Radon Risk Map of Ireland

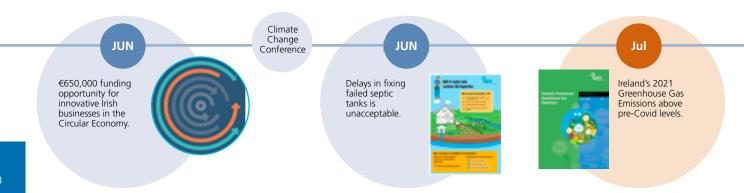
And 15 I house it has to have the hard to have had been ready as to be the hard to b

The extensive media coverage resulted in an increased demand for radon measurement services, particularly from employers checking radon levels in their workplaces. This positive outcome shows an increased understanding among employers of the risk from radon and a willingness to comply with the regulations and to protect employees from radon.

Non-Ionising Radiation

The EPA carried out street-level measurements in 55 urban locations throughout the country to assess typical levels of public exposure to radiofrequency electromagnetic fields (EMF) in Ireland. EMF is exposure to the public arising from wireless telecommunications like mobile phones, radio and TV broadcasting, Wi-Fi and Bluetooth. The results were well below the guideline limits recommended for public exposure to radiofrequency EMF.





CIRCULAR ECONOMY AND WASTE

In a circular economy, we use less raw material, design products for long-life and recyclability, share products, use them for longer and reuse and repair products. We recycle as much material and products as possible and only dispose of what can't be recycled.

In 2022, the Circular Economy Act came into force putting the EPA's Circular Economy Programme on a statutory footing. The programme delivered a range of activities related to implementing, regulating and measuring the circular economy and waste. Collaboration with Government, local government, industry, business and social enterprises is key to the continued success in driving the transition to a low carbon circular economy.



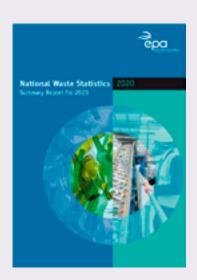
Waste

The EPA has statutory responsibility to monitor, collate and validate data for waste streams generated by households, businesses and industry. This information is published each year and a summary report is produced annually. By tracking waste data, the EPA can record levels of consumption in society as well as report on progress towards meeting reuse, recycling and recovery targets.

The National Waste Statistics Report for 2020, published in December, highlighted worrying trends. Ireland is generating too much waste, and overall waste generation increased to 16.2 million tonnes in 2020, up from 12.7 million tonnes in 2012. While Ireland is continuing to meet many of its current EU targets, those for 2025 and beyond are extremely challenging. The increasing levels of waste undermine efforts to recycle more and the rate of recycling has stagnated. Specific actions are required in 2023 to help improve the recycling performance.

These actions include:

- Introducing mandatory incentivised (pay-by-weight) charging for the collection of commercial waste.
- Expanding the rollout of brown bins to rural areas with no population exemptions and to businesses who are currently not on a service.
- Delivering awareness and education campaigns focused on improving the capture of food waste and plastic packaging from businesses and households.





End of Waste

The regulatory provisions for assessing if materials can be declared as end of waste or as a by-product are helping to achieve a circular economy by allowing for the use of secondary materials as a resource or product. This minimises the extraction of additional natural resources and avoids unnecessary waste generation. Focus in 2022 shifted to developing national criteria for by-product (road plannings and soil and stone) and end-of-waste (recycled aggregates). The development of these national decisions has involved technical assessment, market analysis and stakeholder engagement activities.

In addition to our work on the national decisions, the EPA continued to assess and issue decisions on individual by-product notifications and end of waste applications as illustrated by the following examples:

- Two significant by-product determinations were approved relating to industrial chemicals. These determinations will result in the prevention of significant quantities of hazardous waste, contributing to specific actions set out in the National Hazardous Waste Management Plan.
- For the first time, an end of waste decision from another jurisdiction was recognised for use in Ireland. The EPA recognised a French National end of waste criteria and decision in relation to waste oils allowing for the transportation and use of the product in Ireland without waste authorisations being in place.

Green Public Procurement

Under the Climate Action Plans 2019 and 2021 the EPA is assigned lead responsibility to measure and report on Green Public Procurement (GPP) activity by government departments on an annual basis. In April 2022, the first report, for reference year 2020, was published showing that – of the total reported spend of over €322 million on contracts worth over €25,000 – only 17% (approximately €53 million) included green criteria.



The EPA worked with the Office of Government Procurement to support Green Public Procurement and also continued to deliver training to government departments and public bodies.



Drinking water quality is high but increased vigilance is needed by Irish Water and Local

Authorities to protect

public health



Water quality of our rivers, lakes, estuaries and coastal areas

continues to

decline

OCT



Environmental Science to Policy Seminar



ОСТ

Poorly treated sewage continues to harm the quality of our rivers, lakes and coastal waters

WATER

Clean and well protected water is essential for our health and wellbeing, our economic activities and our wildlife.

Drinking Water

While the quality of drinking water in public supplies remains high, delays in delivering public water improvements continues to put water quality and the public's health at risk. While progress has been good over the last number of years, recently there has been a decline in water quality, with the number of 'at risk' supplies on the EPA's Remedial Action



List increasing to 57 in mid-2022 from 52 in 2021. This underlines the fact that drinking water treatment in many supplies is still not as robust as it needs to be to ensure the supply is resilient and safe into the future.

Following significant incidents during 2021 at the Gorey and Ballymore Eustace water treatment plants, the EPA instructed

Uisce Éireann to implement several actions at all supplies to prevent the reoccurrence of similar issues. As a result, more drinking water quality issues were detected and reported, with the number of Boil Water Notices/Water Restrictions increasing significantly during 2021 (96 notices) – and this increasing trend continued through 2022, protecting the health of approximately 243,000 people.

Water Quality and Quantity

The EPA's Water Quality in Ireland Report 2016-2021, published in October, highlighted the further decline of water quality in Ireland and that, at the current level of progress, Ireland will fail to meet the EU and national goal of restoring all waters to good or better status by 2027. The assessment showed that only just over half of surface waters (rivers, lakes, estuaries and coastal waters) are in satisfactory condition (that is, they are achieving good or high ecological status and can sustain healthy ecosystems for fish, insects and plants). There has been a significant deterioration in the number of estuaries and coastal waters in satisfactory condition, mostly along the southeast and southern seaboards. Urgent and targeted action is required to reduce nitrogen emissions from agriculture in these areas.

During 2022, the EPA monitored 1622 river water bodies, 222 lakes, 90 transitional and coastal water bodies and 126 groundwater bodies for biological and chemical analysis. The EPA also conducted 1,157 river flow measurements, 137 lake level measurements and 485 groundwater level measurements and continued to publish monthly hydrometric bulletins to provide timely information on water resources.







Bathing Water

The latest Bathing Water report showed that 78% of bathing sites have excellent water quality while 97% meet the minimum standard. This on-going improvement in bathing water quality is attributed to improved management of bathing waters over many years, together with investment in the treatment of urban waste water. During 2022, the EPA supported the multi-stakeholder National Bathing Water Expert Group to help identify potential options to better protect bathers who swim year-round.

The Beaches.ie website remains a very popular source of information on bathing water quality with over 80,000 unique page views in 2022.

Urban Waste Water

Treating waste water to make it clean and safe is essential to protect our environment and public health. Improvements in waste water treatment are evident, with the number of priority areas where treatment needs to improve reducing by almost 40% over the past five years, from 147 to 91. However, there is still a long way to go to bring all deficient treatment systems up to standard and provide for future needs. It will take a multi-billion-euro investment and, based on current investment levels, at least two decades to get all treatment systems up to standard.



DEC

Urgent action required to address Ireland's Municipal Waste Recycling



ASSESSMENT

In 2022, the EPA worked to identify and recruit national experts to become involved in the European Environment Agency's modernised knowledge network (EIONET). Irish experts (94 in all) from across 15 organisations were identified and nominated for all 13 EIONET groups, including those on climate, circular economy and biodiversity. These groups will work with lead European experts on shared environment and climate priorities.



The EPA published Ireland's Environment: Maps and Charts in April as a supplement to the most recent State of the Environment report. The 'Ireland's Environment' section of the EPA website was also regularly updated to ensure easy access the most up-to-date information on a variety of environmental topics.

Good Practice Guidance on Strategic Environmental Assessment in the Water Sector was published in September, adding to the EPA's existing suite of SEA sectoral guidance notes. In addition, Guidelines on the information to be contained in Environmental Impact Assessment Reports was published in May to improve the quality of EIARs and make the overall process clearer.



LICENSING AND ENFORCEMENT

A primary function of the EPA is environmental regulation, including assessment, authorisation and enforcement of activities across a range of industries including waste, pharmaceutical, and the power sector. The EPA also manages Ireland's EU Emissions Trading Scheme.

Licensing and permitting decisions undertaken in 2022 included high profile facility expansions and greenfield investment activities in the pharmachem, cement, food and drink, waste, ICT and power sectors.

The security of electricity supply was a key activity for the EPA throughout 2022 with significant engagement with the Department of Environment, Climate and Communications, the Commission for Regulation of Utilities, Eirgrid, and the power sector. Thirteen Licence applications for data centres, and one application for a power plant, were received by the EPA in 2022.

During 2022 the Water Environment (Abstractions and Associated Impoundments) Bill was signed into law. This will be a significant new regime for the EPA once the Regulations are published in 2023. Also, in 2022 the European Commission set out proposals for revised EU measures to address pollution from large industrial installations via an update to the Industrial Emission Directive.

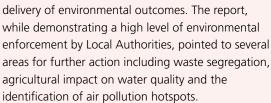


Licence Enforcement

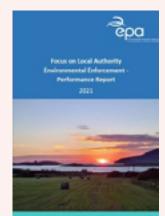
The EPA currently enforces over 800 industrial and waste licences. The EPA's enforcement teams used a risk-based approach to on-site inspections incorporating Remote Compliance Assessments at the start of 2022 but moved to more frequent

in-person inspections as Covid-19 restrictions were lifted. Inspectors responded to significant on-site environmental incidents, emergencies and complaints throughout 2022.

In its role as supervisor of local authority environmental activities, the EPA published the first Local Authority performance report under the new Local Authority Performance Framework. This new framework aims to better align performance scores to the



The fifth Nitrates Action Programme points to the need to improve the number and effectiveness of local authority agricultural inspections. The EPA, in consultation with the relevant authorities, commenced the development of a Local Authority National Agricultural Inspection Programme for the period 2023 to 2025 with the aim of improved protection of water quality.



In 2022, the EPA placed a strategic focus on certain waste sector issues including: the aftercare and management of closed landfills; persistent odour problems at waste processing facilities; and infrastructural and operational requirements at anaerobic digestion facilities. Enforcement efforts were also focused on ensuring compliance with waste acceptance criteria, ensuring a level playing field at soil recovery facilities and on national waste capacity. Regarding illegal waste activities, the EPA targeted high value waste streams, working closely with An Garda Síochána and other regulators through multiagency concerted actions.

The EPA also regulates the use of ionising radiation in hospitals, education, industry, dental and veterinary practices through a system of authorisation and inspection. In August, the EPA published comprehensive Guidance for undertakings on how to comply with the recently updated lonising Radiation Regulations.





RESEARCH

The EPA delivers an environmental research programme to provide essential scientific support for environmental policy development, implementation and broader decision making.

In total, 94 new awards were made in 2022 (€14.4 million) including 42 new awards from the 2022 EPA research call (€10.75 million) addressing climate change and other emerging, complex environmental problems. This funding will contribute to the delivery of high-quality research, evidence-based policy development and further build Irish environmental research capacity. Environmental challenges such as climate change are complex and require an integrated, cross-sectoral approach and the EPA continues to work in partnership with several organisations, including the Geological Survey Ireland, the Department of Agriculture, Food and the Marine and Met Éireann, to co-fund environmental research.

The first Evidence Synthesis Report from the EPA's new Fast-track to Policy Funding Scheme was also published in 2022 (A Signpost for Soil Policy in Ireland).

A key element of the EPA Research 2030 Framework is to develop and engage more proactively in targeted knowledge transfer activities to better inform policy development and implementation. ERINN Innovation have been commissioned to deliver a project that will support and inform targeted Knowledge Transfer from the EPA Research Programme. A successful inaugural EPA Environmental Science to Policy Seminar was held in October to help inform and support the development of the national evidence-for-policy agenda.



ENGAGEMENT

The environmental problems Ireland faces can only be addressed if citizens and stakeholders are engaged and empowered. The EPA places a high value on timely engagement to foster greater understanding, a genuine sense of ownership and hope for the future.

Citizen Science

During 2022, the EPA continued to prioritise citizen science by supporting projects with our current partners: The National Biodiversity Data Centre (NDBC) and An Taisce's Environmental Education Unit (EEU).

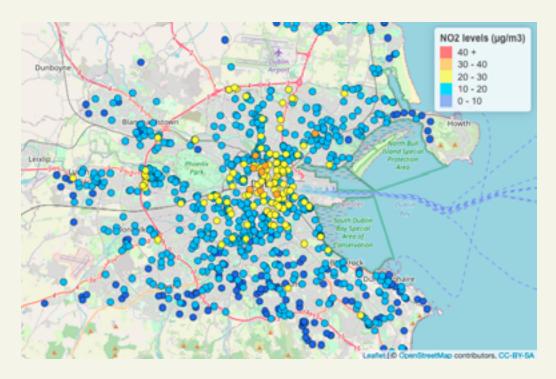
GLOBE Citizen Science

GLOBE is managed by An Taisce's EEU with support from the EPA. Participating schools learn about air quality and the weather by making scientific measurements near their school. In May, the end-

of-year ceremony was held online with over 200 attendees showcasing studies from participating schools. The programme continued to grow in 2022 with 368 schools nationwide taking part in the air quality campaigns.

Clean Air Together

During 2022, the 'Clean Air Together' collaboration with An Taisce's EEU continued with results published in March. Over 1000 residents from across Dublin measured Nitrogen Dioxide (NO₂) levels. The success of the Dublin project led to a new iteration of the project in Cork City where over 900 residents signed up to measure NO₂. These measurements took place in October 2022 with the results published in February 2023.



Clean Air Together – Dublin Results Map

The Story of Your Stuff

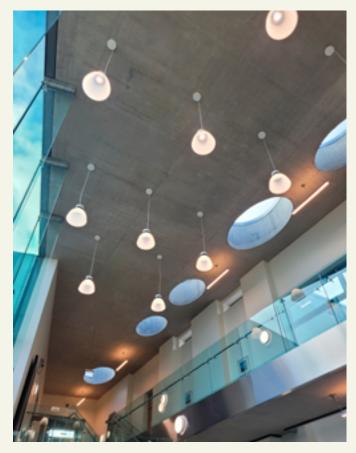
The awards ceremony for the sixth 'The Story of Your Stuff' competition for second level schools took place in April. This year there were 210 entries. A student from St Columba's College in Dublin won the overall prize with a topical video exploring the environmental lifecycle and impact of tissues. The Climate topic prize was won by Saint Eunan's College, Co. Donegal for their entry 'The Story of Beef'. The Irish-language prize was won by Gaelcholáiste Charraig Uí Leighin, Co. Chorcaí for its entry, 'Scéal Certíní' which looked at wet wipes.

Partnerships

Throughout 2022 the EPA continued to seek opportunities to engage with new and younger audiences, including through the sponsorship of an environmental award at the BT Young Scientist competition and the sponsorship of the Environmental Journalism Award for the National Student Media Awards. The EPA worked in partnership with organisations such as ECO-UNESCO and Junior Achievement Ireland to increase environmental awareness and promote the EPA's key messages to these younger audiences.

Greening the EPA

The EPA continued to operate an Environmental Management System, to help us control our impact on the environment from our activities and facilities. The EPA delivered improvements in energy performance, waste management, biodiversity and monitoring of EPA's greenhouse gas emissions. The EPA achieved a 10% reduction in energy usage in 2022, compared to 2019 pre-Covid restriction usage with a three-year rolling plan to deliver even more actions.



Low-Energy Led Lighting



EPA Board:

Dr Micheál Lehane, Dr Eimear Cotter, Dr Tom Ryan, Ms Laura Burke (Director General), Mr Gerard O'Leary and Ms Sharon Finegan

Headquarters

PO Box 3000
Johnstown Castle Estate
County Wexford, Ireland, Y35 W821
T +353 53 916 0600
F +353 53 916 0699
E info@epa.ie

LoCall: 0818 33 55 99 Twitter: @EPAireland

www.youtube.com/user/epaireland



National Environmental Complaints:

T: 1800 36 51 23

App: See it? Say it!