

Environmental Protection Agency

2021
in Review

Key Statistics – 2021 in Numbers

AUTHORISATIONS

118

environmental
authorisations
issued

569

authorisation
amendments
completed

3

decisions on
end-of-waste
criteria issued

275

by-product
notifications
processed

132

radiation authorisations
and 529 technical
amendments issued

ENFORCEMENT

212

urban wastewater
and 79 drinking
water site visits

1,295

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

13

prosecutions
concluded

9

drinking water
Directions issued to
Irish Water

75

inspections of
Radiological
Licensees

11

sites on the
National Priority
Sites for
Enforcement

CIRCULAR ECONOMY

€710k

awarded to eight enterprises
under the 2021 Green
Enterprise: Innovation for a
Circular Economy funding call

7.5m

reach in national
Stop Food Waste
'Stretch Out and
Save' campaign

MONITORING

1,539

water bodies monitored for
biological and chemical
analysis

97

air quality
monitoring
stations

844

samples
analysed for
radioactivity

INFORMATION

722,297

visits to www.epa.ie

112

information requests
(52 AIE and 60 FOI)

9,900+

environmental complaints reported

2,900+

environmental queries
from the public

409

EPA datasets uploaded to
data.gov.ie with
76,054 total views

RESEARCH

41

Research Reports:
9 Climate, 7 Green & Circular Economy,
13 Healthy Environment and 12 Natural Environment

EMERGENCY PREPAREDNESS

1

in-house emergency exercise
involving a range of teams across the EPA

7

international emergency
exercises participated in

RADON

136,890

pageviews of radon related content
on the website

Response to Covid-19 pandemic

One lesson from the past two years is that well-communicated science can successfully inform policy, perception, and behaviour, even when the challenges are daunting. As we adapt to the lasting effects of the COVID-19 pandemic, Ireland's response to the growing climate crisis requires action guided by high-quality science, data and analysis. The work of the EPA has never been more relevant.

In 2021, Ireland's environment has emerged as something we deeply treasure. For individuals, it is invaluable to our mental health, and for society it is the key asset in our progress towards a sustainable, circular economy.

There is an opportunity now to build the foundation for a green recovery to protect and restore Ireland's environment. The EPA supports actions at every level – government, business, and individual – to be informed by science, which is targeted and focussed on changing our current unsustainable consumption and production patterns.

Throughout the pandemic the essential work of the EPA continued to ensure that the protection of human health and the environment was not diminished. As an environmental regulator the EPA has adapted to circumstances, responding to complaints, incidents and emergencies, carrying out site inspections and engaging with licensees in a risk-based and proportionate manner. We have also adapted our outreach and engagement with the public, expanding our audience through a new website and switching to online webinars for our annual conferences.

Results of a recent opinion poll undertaken by the EPA showed that 86% of adults agree the environment is a valuable asset to the people of Ireland – a sentiment that has remained consistent over the past four years.



JAN

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



Ireland's 2020 greenhouse gas emissions estimated almost 6 per cent lower due to the pandemic

FEB

The quality of drinking water in private water supplies is not good enough and is putting health at risk

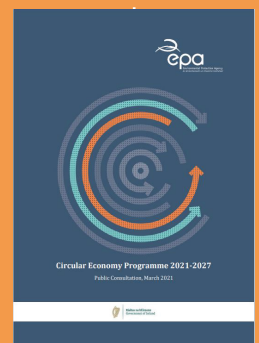


Innovative enforcement during the Covid-19 pandemic



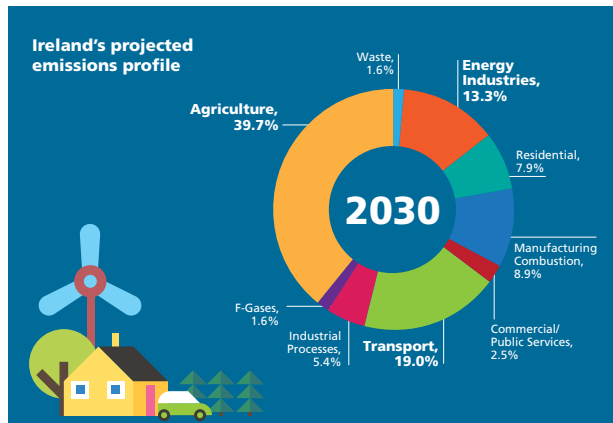
Climate Change Lecture

MAR



Draft Circular Economy Programme for public consultation

Climate Change

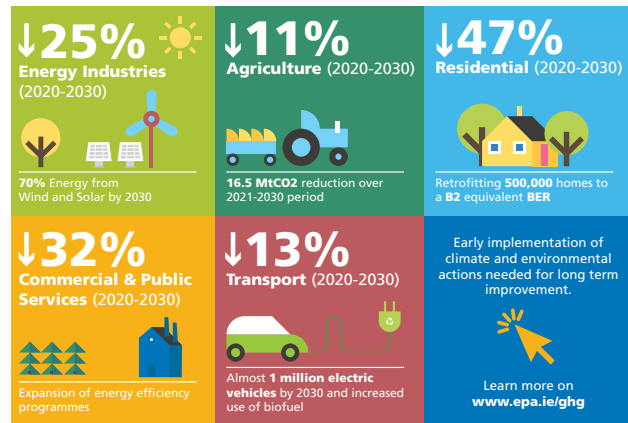


Ireland's projected emissions profile 2030

The EPA's role in addressing climate change challenges include: preparing and projecting national greenhouse gas emissions; regulating emissions from industrial sectors; supporting climate science research; supporting behavioural change to promote a circular economy and facilitating the National Dialogue on Climate Action.

**For the 4th year in a row,
Climate Change was selected as the most
pressing environmental issue facing Ireland.**

In the context of the public's intensified engagement on climate change, the EPA published data to support and inform Ireland's response. Greenhouse gas inventory data published in October showed a reduction in emissions of 3.6% between 2019 and 2020. The overall emission reduction was driven by two main factors: the decreased transport emissions due to Covid restrictions and reduced emissions intensity in electricity generation. The small reduction in emissions during 2020, at a time of profound change in economic and social activity due to the pandemic, highlights the scale of action needed across all parts of our economy and society to meet the 51% emissions reduction target by 2030 set within the 2021 Climate Act. Urgent action is also necessary to avoid a growth in greenhouse gas emissions that may accompany an economic recovery as pandemic restrictions are lifted.



Ireland's projected emissions profile 2030 WAM

The EPA published the first report from its Climate Change in the Irish Mind project in December. This work was undertaken by EPA and the Yale University Program on Climate Change Communication in support of the National Dialogue on Climate Action. This is the first study of its kind to be undertaken in Ireland using Yale's internationally recognised approach. 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 showed the public's overwhelming recognition of the threat from climate change - they feel personally affected by it and want to see real change. The public have very 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.

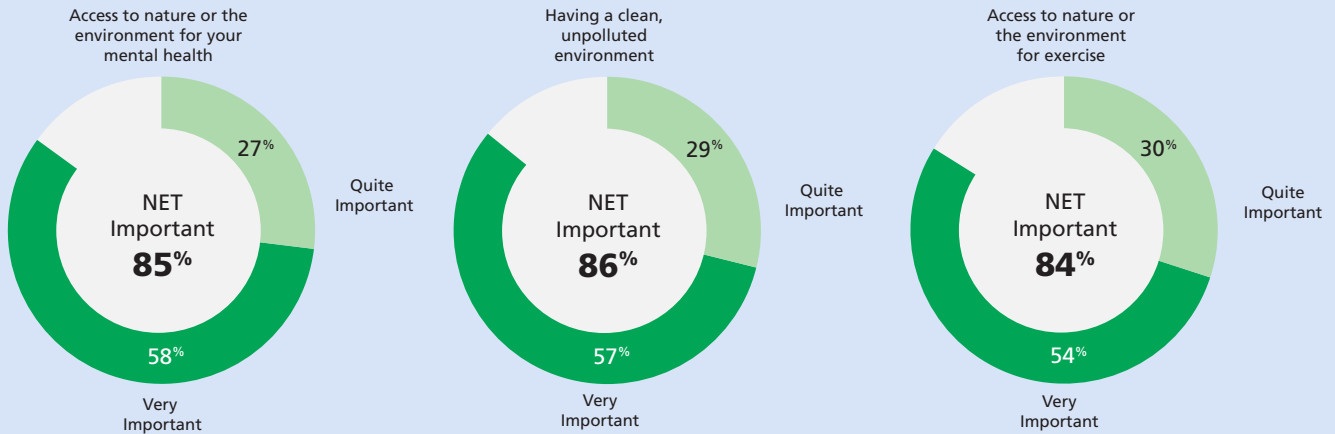
The EPA is responsible for coordinating Climate Research in Ireland. A five-year assessment of climate research in Ireland is in preparation and Science Foundation Ireland and Sustainable Energy Authority Ireland have provided support for the process. The EPA established the Climate Research Coordination Group in 2014. As part of the Group's obligation under the Climate Action Plan, it produced its third annual report this year about climate research activities in 2020.

In August, the EPA, Met Éireann and the Marine Institute published a report on "The Status of Ireland's Climate". This comprehensive analysis of climate data collected in Ireland details how global changes are being reflected in Ireland's atmosphere, oceans and landscape.

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. A clean healthy environment with green and blue spaces are essential components of Ireland's health infrastructure.

Four in five adults found that having a clean, unpolluted environment and access to nature or the environment was important for exercise and their mental health during the Covid-19 pandemic.



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 nine stations in 2021, real-time air quality monitoring has more than trebled in Ireland since implementation of the programme began at the end of 2017 and the national network will be completed in 2022. The Air Quality in Ireland Report 2020 highlighted the two key air quality issues: particulate matter from solid fuel combustion and nitrogen dioxide from traffic emissions.



The EPA LIFE Emerald project commenced in 2021 and over the next three years will deliver a national forecast, a "nowcast" (to provide ambient air quality for all areas between monitoring stations) and historic national air quality maps.

APR



Power generation and industrial emissions drop by 6.4 percent in 2020



The story of disposable face masks claims top prize in 2021 competition

MAY

Bathing water quality continues to improve but pollution incidents affect some beaches



€10.5 million funding for research to support environmental policies



JUN

Climate Change Conference



Ireland continues to be in non-compliance with the EU National Emissions Ceiling Directive

Everyone needs to do a simple radon test in their homes



Water Conference



Fixing septic tanks that fail inspection is a priority

Radiation Monitoring

The EPA maintains a National Radiation Monitoring Network to provide an alert, and identification of type of radionuclides, in the event of the arrival in Ireland of radioactivity via atmospheric dispersion. The network is currently being upgraded with new instrumentation and additional monitoring sites.

Radioactivity analysis of major drinking water supplies, bottled water, food, marine and the terrestrial environment, showed that the radiation dose does not constitute a significant health risk.

Radon gas

During 2021, the EPA ran three radon awareness campaigns in conjunction with other public outreach activities to urge householders to take action on radon and test their homes.

The EPA's new radon risk map (to be published in 2022) was shortlisted for an Analytics Institute Ireland Public Sector award. Work on the map was completed in



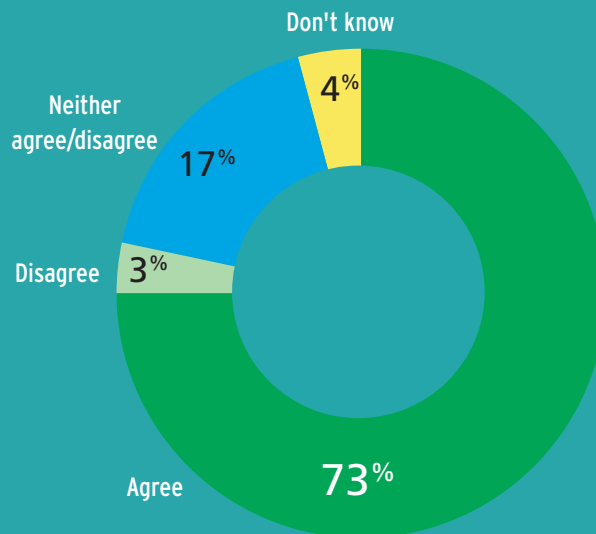
conjunction with Geological Survey Ireland and Trinity College Dublin. In collaboration with the Economic and Social Research Institute, the EPA undertook online user testing with the public of the updated radon risk map. The testing found that optimising features of the map such as colour, language and search functionality greatly increased people's willingness to test their homes.

The EPA submitted a report to the National Radon Control Strategy co-ordination group and the Department of Housing, Local Government and Heritage following completion of field trials that showed significant reductions in radon levels in a sample of newly built unoccupied Irish dwellings with passive sumps and static cowl.

Non-ionising radiation

The EPA has continued to provide advice on public exposure to electromagnetic fields throughout 2021. Despite delays due to Covid-19 restrictions, a total of 30 of the 56 monitoring sites, planned in the national monitoring programme, were surveyed during the year.

73% of adults say they have made changes or taken steps personally to help the environment



JUL

Stretch out and save €700 this summer



Urgent action needed to curb nitrogen pollution in Ireland's waters



AUG

Global climate change means Ireland is warmer and wetter



Become a Citizen Scientist – measure air pollution in Dublin



SEPT

More packaging waste, falling recycling rates for plastic.



Green Public Procurement: Guidance for the Public Sector



Waste and the Circular Economy

Waste has a significant impact on our environment and economy. As a society we need to rethink how we make, transport and use products, avoid unnecessary packaging and maximise reuse and recycling.

In 2021, the EPA invested almost €2 million in driving a circular economy in Ireland. In December, the EPA launched the Circular Economy Programme, which will be the driving force for Ireland's transition to a circular economy, where businesses, citizens and the public sector reduce resource use, prevent waste and achieve sustainable economic growth. The programme will also support the whole-of-government Circular Economy Strategy and promote circularity as an economic model, enhancing coherence and alignment among national, regional and local activities.



Generation and recycling

National statistics on waste generation and management compiled by the EPA for 2019 highlight that waste generation in Ireland continues to rise and is linked to economic activity while circular use of material remains very low. Recycling rates for municipal waste and packaging waste have declined, with more waste being sent for energy recovery.

Ireland continues to generate over one million tonnes of packaging waste per year. Less than a third of plastic packaging waste was recycled and the share being incinerated has grown year-on-year. The increase in plastic packaging being recycled is offset by an even greater increase in the amounts of packaging waste being generated and incinerated and, as a result, Ireland's recycling rates have generally declined since 2013. Ireland continued to meet all current EU targets and achieved high recycling rates in some packaging material streams. However, some negative trends continue, and the country faces a widening gap to meet ambitious new EU recycling targets from 2025 onwards.

A 'green' recovery stimulus provides a unique opportunity to generate lasting economic activity that does not over-burden the environment and waste our limited resources. Eight enterprises were funded through the EPA's €625k Green Enterprise Innovation for the Circular Economy Fund in 2021. The fund is aimed at business-ready innovative projects targeting the area of food; plastic; construction & demolition and resources & raw materials. Circular business models contribute to a climate-neutral, resource-efficient economy, but also offer competitive opportunities and appeal to consumers looking for sustainable options.

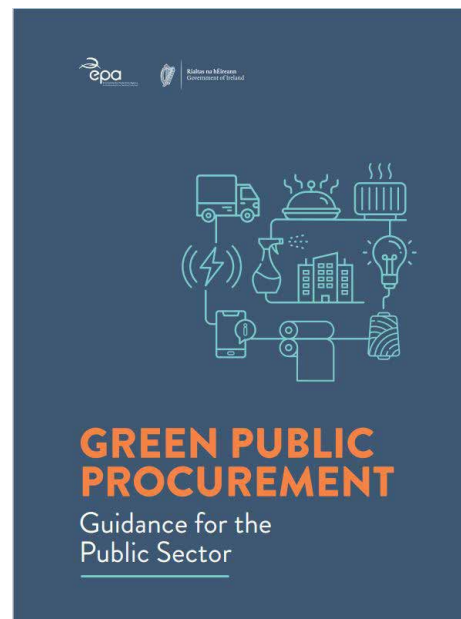
Food waste

In October, the EPA promoted an awareness campaign encouraging 25–34-year-old males to reduce food waste by checking and using up food in the fridge, which led to a 53% increase in visits from this cohort to the Stop Food Waste website. The campaign was on foot of a 2020 survey which found that this age group report they waste the most food overall with 21% saying they throw out food to make space for more recent purchases.



Hazardous Waste

In December, the EPA published data on Ireland's generation of hazardous waste showing a decrease in the quantity generated in 2020. The National Hazardous Waste Management Plan, 2021–2027, also published in December sets out a range of recommended and co-ordinated actions for multiple stakeholders to raise awareness, prevent hazardous waste and improve the collection network.



Green Public Procurement

The EPA continued to provide guidance, develop training and advice for monitoring and reporting of Green Public Procurement in 2021. In September, the EPA revised and published guidance and accompanying criteria for the Public Sector seeking to source goods, services or works with a reduced environmental impact.

Water

A clean aquatic environment is a critically important national resource, 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. There has been good progress recently with the number of "at risk" supplies on the EPA's Remedial Action List reducing from 77 in 2017 to 52 in 2021. However, 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.

During August and September 2021, the EPA responded to two very significant incidents at drinking water treatment plants in Gorey and Ballymore Eustace that highlighted an abject failure of managerial oversight, operational control and responsiveness by Irish Water and the Local Authorities in terms of their respective roles to deliver safe and secure drinking water. Boil water notices are essential when drinking water supplies are compromised and should have been put in place to protect the health of the 877,000 people served by these supplies. The EPA's auditing has been updated to focus on incident awareness and reporting.

Water Quality Indicators

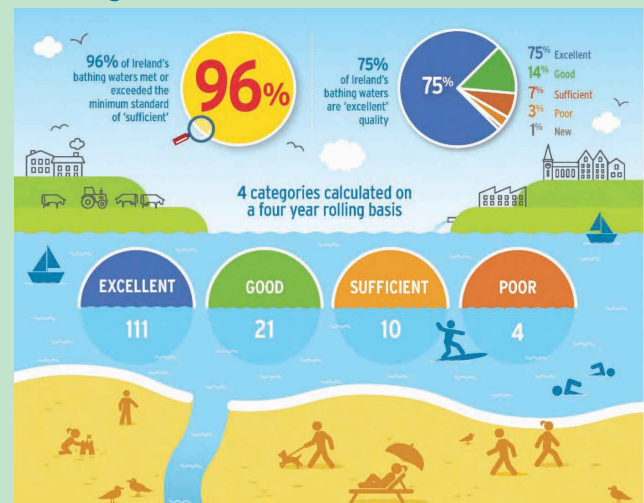


During 2021, the EPA monitored 1,096 rivers, 223 lakes, 135 groundwater and 85 coastal waters and estuaries for biological and chemical analysis. Despite Covid restrictions, more than 96% of the planned sampling programme under the Water Framework Directive were received and analysed.

Analysis of data for 2020, published in July, highlighted the main threat to the aquatic environment was high nutrient levels, such as phosphorus and nitrogen which come from human activities such as agriculture and urban waste water discharges. Almost half our rivers, a quarter of our groundwaters and one fifth of our estuarine and coastal water bodies have nitrogen levels that are too high. Of the rivers assessed, there has been a modest overall improvement in river biological quality with 345 rivers showing improvements, however, 230 rivers declined in quality.

The EPA's science and evidence informed and supported policy development and in particular the 3rd River Basin Management Plan, the Nitrates Action Plan and the CAP Strategic Plan through the publication of the updated Pollution Impact Potential (PIP) maps and the assessment of the nitrogen reductions needed to support good water quality.

Bathing Water



Bathing water quality continues to improve with 96% meeting or exceeding the minimum required standard. Clifden beach in Galway was classified as 'Poor' for five years and was 'declassified' in 2021 due to persistent poor water quality. Information on the quality of bathing waters may be accessed through the [Beaches.ie](https://beaches.ie) website which remained very popular in 2021 with almost 180,000 unique page views. The [Beaches.ie](https://beaches.ie) website was upgraded to capture and publish out-of-season bathing water monitoring data which are collected by some of the Dublin local authorities.

Hydrometrics

Monthly hydrometric bulletins with collated data continued to be published throughout 2021 with the EPA conducting 1,516 river flow measurements, 156 lake level measurements and 531 groundwater level measurements.

Urban Waste Water

Waste water must be treated to make it clean and safe before it is released back into rivers, estuaries, lakes and coastal waters. Improvements in waste water treatment are evident, with the number of priority areas reducing by one-third over the past four years. However, the pace of delivery of essential improvements is too slow to bring all deficient treatment systems up to standard.

Waste water discharge licences have been updated to improve the enforceability of the specific conditions which will in turn assist EPA enforcement of the licences, provide consistency and help to protect the environment.

Assessment

Following the publication of the four-yearly State of Environment report in late 2020, the EPA continued to promote its findings, publishing a booklet presenting summary information, key messages, chapter highlights, actions, current assessment and outlook.

In March, the EPA published national guidance for the Energy Sector on Strategic Environmental Assessment.

Land use

Ireland's land is a precious resource and fundamental to our economy, our environment, and our wellbeing. As such, a holistic systems approach is required to use and

manage land to balance the many demands that are placed on it in terms of the complex challenges of climate change and biodiversity loss.

The EPA was tasked by Government in 2020 to lead a national land use evidence review. This work is assisted by several state agencies and government departments through a national steering group chaired by EPA. The evidence synthesis is to support the ambition that 'optimal land use options inform all relevant government decisions' and that future national land-use policy will maximise carbon uptake whilst ensuring sustainable and resilient outcomes for society, the economy, and the environment. The evidence review is expected to be completed in the second half of 2022.


Licensing and Enforcement

A primary function of the EPA is environmental regulation, including assessment and authorisation 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 2021 included high profile facility expansions and greenfield investment activities in the pharmaceutical, cement, food and drink, waste, ICT and power sectors. There was also significant engagement with the Commission for Regulation of Utilities, Eirgrid, Department of Environment, Climate and Communications and the power sector on security of energy supply issues.

During 2021, the EPA was assigned a new activity under the Dumping at Sea Act, 2009, as amended, to regulate the deliberate disposal in the maritime area of an offshore installation.

The EPA continued to provide input to the Department of Housing, Local Government and Heritage on the preparation of legislation for the authorisation of abstraction and impoundments which will be a significant new regime for the EPA.



INDUSTRIAL AND WASTE LICENCE ENFORCEMENT SUMMARY 2020

www.epa.ie | @EPAIreland

Despite the significant impact of Covid 19 during 2020 the Office of Environmental Enforcement (OEE) continued to carry out the enforcement of IE, IPC and Waste licences at over **830** individual installations throughout Ireland.

The essential work of the EPA continued in 2020 thereby underscoring the importance of ensuring that the protection of human health and the environment is not diminished as a result of the current pandemic. The EPA continued to carry out enforcement activities in a risk based and proportionate manner in line with the EPA Compliance and Enforcement Policy.

In reaction to the pandemic and the associated restrictions that were imposed, the OEE engaged with the licensed community to ensure that they continued to meet their regulatory requirements and ensure the protection of health and the environment.

In response to these challenges the OEE continued its normal work practices where possible and also implemented a series of innovative measures to ensure enforcement actions were continued.

Further details on the EPA's enforcement activities for 2020 are available at <http://www.epa.ie/industrialwastedata/>

ENFORCEMENT CHALLENGES

- SITE INSPECTIONS
- COMPLAINT INVESTIGATION & RESOLUTION
- EMISSIONS MONITORING
- NATIONAL PRIORITY SITES
- KEY ENVIRONMENTAL ISSUES

OCT

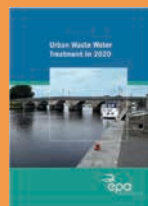


Pandemic restrictions, less peat and more wind energy lead to reduced greenhouse gas emissions in 2020

Unacceptable delays and slow pace in waste water treatment improvements

Environmental Law Enforcement Conference

Environment Health and Wellbeing Conference



NOV



Climate Change Lecture



Forum on Food Waste



Large decrease in air pollution from traffic in 2020 due to COVID-19 restrictions

DEC



Overwhelming agreement on the threat of climate change and the desire for action

More focused and co-ordinated enforcement is needed by local authorities to protect water and air quality



Rising waste volumes and falling recycling rates



Vulnerability of drinking water supplies must be urgently addressed by Irish Water

Licence Enforcement



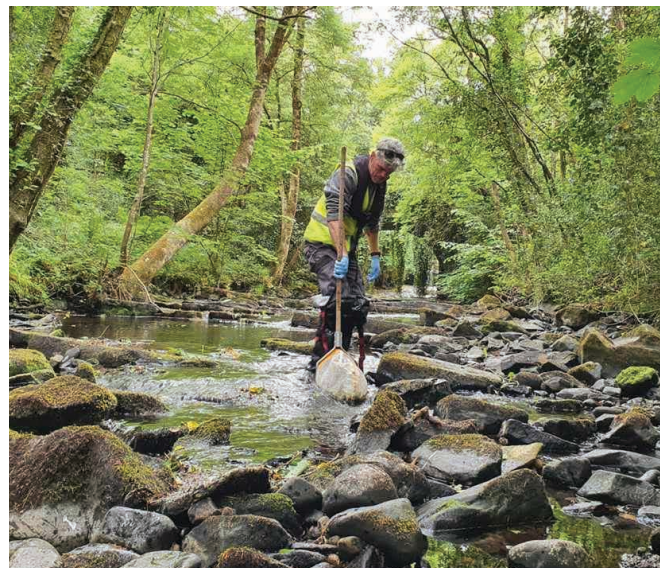
The EPA currently enforces over 800 industrial and waste licences. The EPA's enforcement teams used a risk-based approach to on-site inspections incorporating Remote Compliance Assessments to adapt to Covid restrictions. Inspectors responded to significant on-site environmental incidents, emergencies and complaints throughout 2021.

A noticeable aspect of the pandemic, as people worked from home or accessed their local green and blue spaces, was a 22% increase in enquiries to the EPA about wastewater, drinking water, waste, neighbourhood noise and air quality. In its role as supervisor of local authority environmental activities, the EPA noted a 10% increase in complaints to local authorities about waste and littering during 2020. The EPA also saw an increase in complaints about licensed sites, mostly odour related. Although three sites accounted for almost half of the complaints received, there was an overall increase across the country. In the case of the three significant sources of complaints, actions were taken by the licensees, following intervention by the EPA.

Following several fires at licensed and permitted waste facilities in early 2021, the EPA carried out a targeted campaign of inspections of waste facilities focusing on the risk of fire. Over 40 licensed sites were visited, resulting in improvements in waste management and a consequent reduced fire risk.

The EPA also regulates the use of ionising radiation in hospitals, education and industry through a system of licensing and inspection. Licensing applies to higher risk or more complex applications, while registration is applicable to lower risk applications. At the end of 2021, 259 licences and 1,453 registrations were in place.

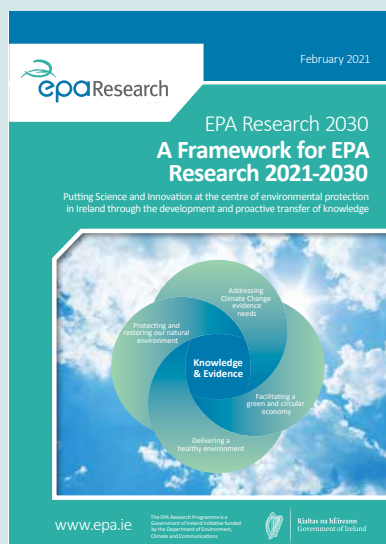
Water Enforcement



The EPA enforces water regulations and licences as well as certificates of authorisation in relation to Irish Water. Throughout 2021, staff at the EPA, Irish Water and local authorities continued to respond to significant on-site incidents, emergencies, and complaints.

Research

The EPA delivers an environmental research programme to provide essential scientific support for environmental policy development, implementation and broader decision making. In total, 58 new awards were made in 2021 (€9.91m) including 30 new awards from the 2021 EPA research call (€7.49m).



A new ten-year high-level framework for the EPA's research programming was launched in March 2021 with four thematic priorities – climate change, circular economy, delivering a healthy environment and protecting and restoring our natural environment. The Framework is designed to be agile, responsive and flexible. To support the framework and act as a resource for its implementation, the EPA also published an accompanying Action Plan and a Thematic Research Areas Assessment.

The EPA launched a new Fast-track to Policy research funding scheme in 2021 to strengthen the research-policy interface and provide evidence synthesis, review of policies and best practices to answer urgent emerging policy questions.

Engagement

The environmental problems Ireland faces can only be addressed if citizens and stakeholders are engaged and empowered. 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 hope for the future.

Website

In response to recommendations in the OECD's review of EPA (2020) and the EPA's 7th Advisory Committee report, the EPA re-developed its website during 2021 to provide users with a relevant and user-friendly website, with access to the information they need in a modern dynamic format.

Online Events

The EPA hosts events to increase awareness of environmental issues and the work being done to address these issues. Adapting to Covid restrictions, the EPA hosted nine public events online during 2021 which, in some cases, increased attendance up to three-fold.

Citizen science

During 2021, the EPA continued its important role of raising awareness and supporting citizen science initiatives. Participation by the public throughout 2021 exceeded expectations and is evidence of a strong desire to meaningfully support EPA efforts to deliver on environmental commitments and accelerate necessary climate action.

GLOBE Citizen Science

The EPA continues to work with An Taisce on the GLOBE citizen science programme. Schools participating in the spring and autumn air quality campaigns measured nitrogen dioxide at three locations around their schools, finding that maximum values are typically recorded closest to a main road. The programme continued to grow in 2021 with over 100 schools covering every county participating in the programme.



Clean Air Together

During 2021, a larger citizen science air quality programme 'Clean Air Together' was established in conjunction with An Taisce's Environmental Education Unit. This was rolled out in 2021 in Dublin to over 1,000 participants who took samples for nitrogen dioxide levels in their local area. The results of the survey will be available in early 2022.

The Story of Your Stuff

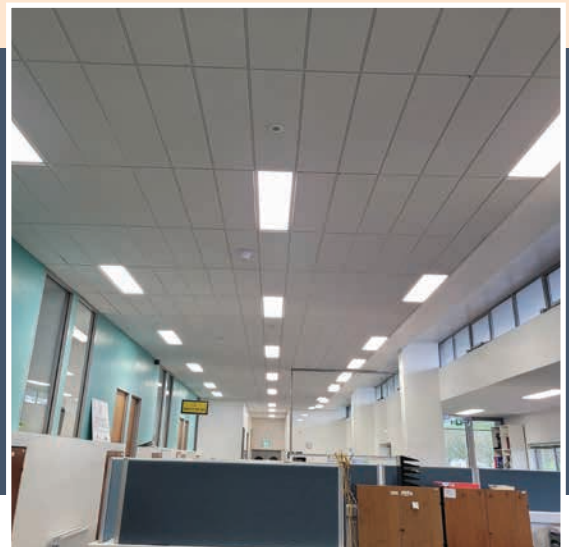
The virtual awards ceremony for the fifth 'The Story of Your Stuff' competition for second level schools took place in May 2021. A student from Presentation College Athenry, Co. Galway won the overall prize with his topical video, 'The story of disposable face masks'. In a record year for participation, over 330 entries were submitted from 76 schools across the country.

Partnerships

Throughout 2021 the EPA continued to seek opportunities to engage with new and younger audiences while increasing environmental awareness and promoting the EPA's key messages. EPA working in partnership with ECO-UNESCO and Junior Achievement Ireland, sponsored an environmental award at the 'virtual' BT Young Scientist competition and sponsored the Environmental Journalism Award for the National Student Media awards.

Greening the EPA

The EPA's Environmental Management System continued to operate effectively and undertook external ISO14001 environmental management audits. The environmental management programme delivered improvements in energy performance, waste reduction, hazardous waste management, biodiversity and green public procurement. LED lighting was installed in the EPA's headquarters which will result in a 39-tonne annual reduction in carbon emissions. Energy efficiency reviews were conducted in all other EPA locations to inform energy reduction actions to achieve the 2030 Climate Action targets.





Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

www.epa.ie

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: 818 335599

Twitter: @EPAireland

www.youtube.com/user/epaireland



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

View organisation structure at:

www.epa.ie/who-we-are/roles--responsibilities/organisational-structure/



National Environmental Complaints:

T: 1800 36 51 23

App: See it? Say it?