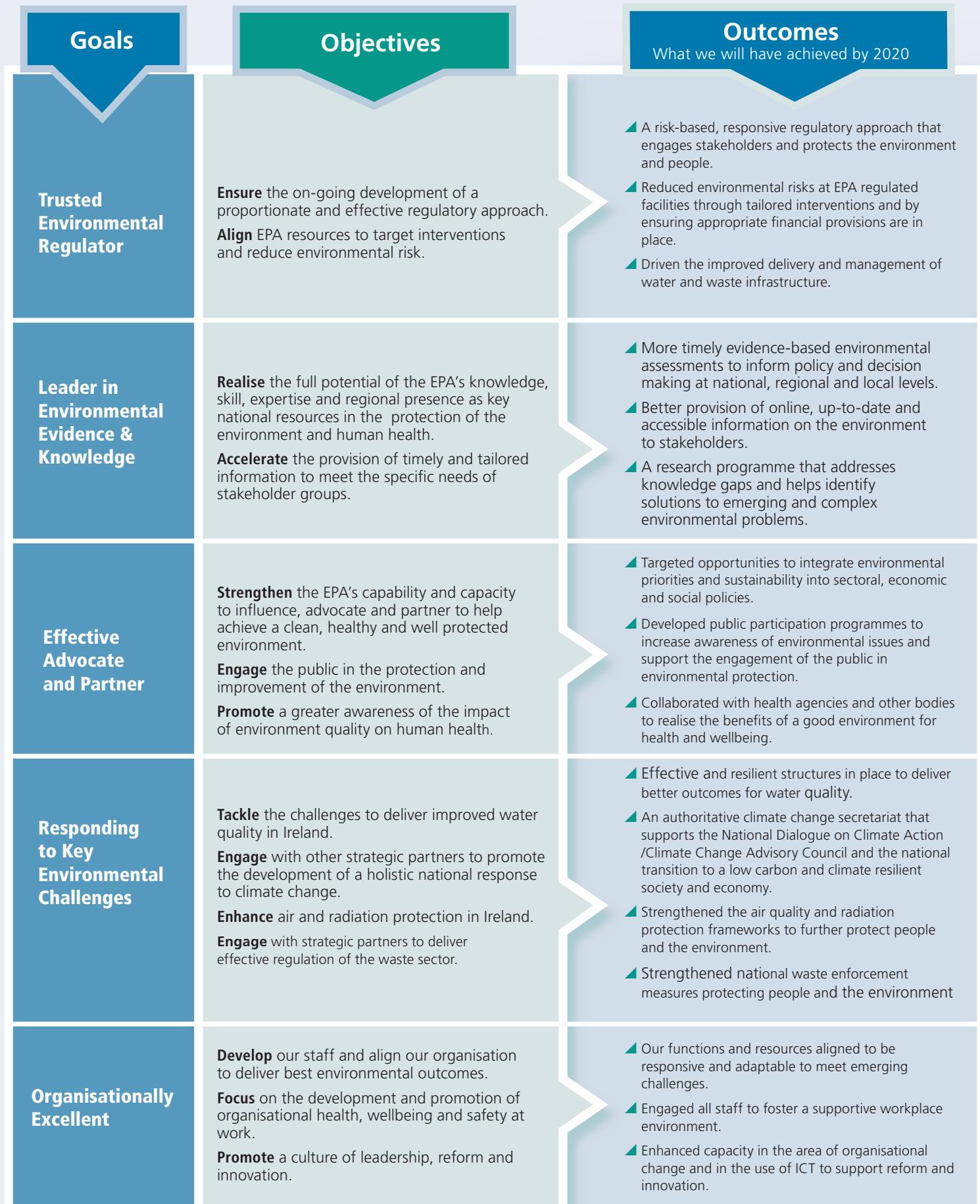


A wide-angle photograph of a rocky coastline. The foreground is covered in various sizes of brown and grey rocks. In the middle ground, a low-tide beach is visible, leading to a body of water. The background shows distant green hills under a blue sky with scattered white clouds. The sun is positioned in the upper right, creating a bright lens flare and casting light rays across the sky.

ENVIRONMENTAL PROTECTION AGENCY  
**2020 in Review**

# Strategic Goals

## for the period 2016-2020



# Key Statistics — 2020 in Numbers

## AUTHORISATIONS

**131**

environmental authorisations issued

**69**

authorisation amendments completed

**2**

End-of-waste criteria agreed for LDPE plastic

**305**

radiation authorisations and 632 technical amendments issued

**494**

Article 27 By-Product Notifications Processed

## MONITORING

The following were monitored for chemistry parameters:

**1,761**

1,179 Rivers, 222 lakes, 272 Groundwaters and 88 Transitional & Coastal Waters were monitored for biological and chemical parameters.

**18**

AQ monitoring stations added to the network

**119**

Public/Private drinking water supplies for radioactivity

**88**

air monitoring stations operating

## INFORMATION

**1,046,496**

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

Twitter (EPAIreland, Stopfoodwaste, EPA Catchments, EPA Beaches, EPA Research, EPA Air Quality, EPA Ecology): 42,969  
Instagram (EPA Ireland): 1,681  
LinkedIn (EPA Ireland and EPA Research): 18,477  
YouTube: 1,593

**10,300+**

environmental complaints reported

This includes:

5,800+ via See it? Say it? App; 2,200+ via National Complaints Line; 2,300+ direct to EPA including 1,300+ about licensed activities and 30+ about drinking water supplies).

## ENFORCEMENT

**127**

urban wastewater and 51 drinking water site visits

**1,089**

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

**13**

prosecutions concluded in 2020

**75**

inspections of Radiological Licensees

**5**

drinking water Directions issued to Irish Water

**12**

sites on the National Priority Sites for Enforcement in 2020; the agri-food and waste sectors accounted for the majority of sites on the list.

## CIRCULAR ECONOMY

**800**

Close to 800 businesses registered on the national repair directory ([repairofstuff.ie](http://repairofstuff.ie))

**5**

major retailers (representing nearly 70% of the Irish grocery market) signed the Food Waste Charter

**33**

applications received for the Green Enterprise: Innovation for a Circular Economy programme, and 6 new projects were awarded funding

**29,000+**

people engaged with the Stop Food Waste programme by following social media channels

## RESEARCH

**54**

Research Reports, 25 Climate, 22 Sustainability and 7 Water

## EMERGENCY PREPAREDNESS

**20**

in-house emergency exercises held

**7**

international emergency exercises participated in

## RADON

**102,441**

pageviews of radon related content on the website

**113**

information requests (60 FOI and 53 AIE)

## A Year in Review - EPA Response to Covid-19

The Covid-19 global pandemic has affected all aspects of Irish society with businesses, facilities and amenities across Ireland closing with sudden and unprecedented impact. During this time, the essential work of the EPA continued so as to ensure that the protection of human health and the environment was not diminished as a result of the lockdown. Throughout the pandemic, the EPA continued to work with those it regulates, responding to complaints, incidents and emergencies, carrying out site inspections and engaging with licensees and the public in a risk-based and proportionate manner.

Monitoring of key air pollutants continued at stations across Ireland as well as monitoring of water quality in Ireland's rivers, lakes, estuaries, coastal and ground waters. Although Covid-19 presented unique challenges, EPA staff continued to adapt to ensure the ongoing provision of services and fully carried out its remit.

In Ireland, as in other parts of the world, there were positives associated with a lower societal impact on the environment, including less traffic on our roads as industrial activities were wholly or partially shut down, offices emptied, less aircraft in the sky, and many people were

**Results of a recent opinion poll undertaken by the EPA showed that more than 3 in 5 adults used less fuel for transport during the pandemic, while the majority of the Irish population have started walking or cycling, considered buying locally produced goods and have increased recycling.**



restricted to their homes and local areas. This led to a short-term reduction in emissions of greenhouse gases and air pollutants, lower generation of waste in some sectors and an overall reduced impact on the environment. In July, the EPA published a briefing note '*Ireland in the Pandemic: Environmental Observations*', which discusses activities across a range of thematic areas. The report found that as Ireland emerges from the pandemic crisis, we need to look to stimulate economic activity. It is crucial, however, that we do so with targeted climate and environmental actions that focus on changing our current unsustainable consumption and production patterns.

## OECD Review

In 2018, the EPA commissioned the Organisation for Economic Cooperation and Development (OECD) to undertake a review of the EPA, with consultations carried out in 2019. The OECD team were supported in their work by peer reviewers from Norway, Scotland and Portugal. The OECD team met with a wide range of stakeholders including non-governmental organisations, government departments and members of the Oireachtas.

The review, published in early 2020, found that "*the EPA has established itself as a trusted and respected body for environmental and radiological protection that is recognised for its scientific integrity.*" In addition, the report found that "*EPA data and reports are the reference for knowledge on*

*Ireland's environment and the EPA is seen as an authoritative voice on environmental issues, networking effectively at a European level, where it has gained a reputation as an innovative, open organisation with many good practices to share.*"

The OECD highlighted that the EPA faces an evolving context and that important strategic decisions about our future role and objectives would ensure our attractiveness as a modern employer and cutting-edge regulator, demonstrating the impact of our work through clear performance reporting. The EPA has already acted on several of these OECD recommendations and will embed further in the new EPA strategy which will be published in 2021.

# 2020

## JAN



EPA warns that poorly constructed wells and inadequate monitoring of private water supplies are putting health at risk



EPA partners with UCD Earth Institute for 'The Story of Your Stuff' competition 2020



## FEB

National Dialogue on Climate Action - Climate lecture 'The Green Deal: Delivering a Climate-Neutral Europe'



Funding of €10 million announced for new environmental research



## MAR



Ireland produces over half a million tonnes of hazardous waste annually



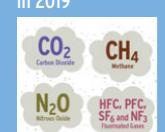
AirQuality.ie

## APR



AirQuality.ie

Recent trends in air pollution in Ireland



# State of Environment Report 2020



## Ireland's Environment An Integrated Assessment 2020



Published in November, *Ireland's Environment: An Integrated Assessment 2020* is the seventh in the series of State of Environment (SOER) reports from the EPA. These reports provide national evidence about the condition of our natural environment, and the challenges and opportunities associated with protecting it. The latest assessment found that the overall quality of Ireland's environment is not what it should be, and the outlook is not optimistic, unless we accelerate the implementation of solutions across all sectors and society. We have enduring challenges in relation to water and air quality, biodiversity loss, resource efficiency, Greenhouse Gas emissions and resilience to climate disruption, underdeveloped environmental and transport infrastructure and urbanisation pressures, as well as harms that flow from our unsustainable production and consumption practices.

Environmental issues and challenges are complex and interconnected and need to be tackled in an integrated way. In launching the report, the EPA called for an overarching, national environmental policy position to which all government departments, agencies, businesses, communities and individuals could sign up to. This would provide clarity on Ireland's ambition and commitment to protect the environment and live up to the image of a Clean Green Island.

The report highlighted people's greater awareness about the positive benefits of a clean environment for health and wellbeing, particularly in light of the Covid-19 pandemic, showing that an investment in the environment is also an investment in health. The green and blue spaces where people reconnect with nature - parks, coasts, lakes, rivers, forest, and bogs - need to be clean and protected.

## Climate Change

Even in times of significant public health concerns, climate issues in Ireland have seen a marked escalation in social awareness and public engagement.

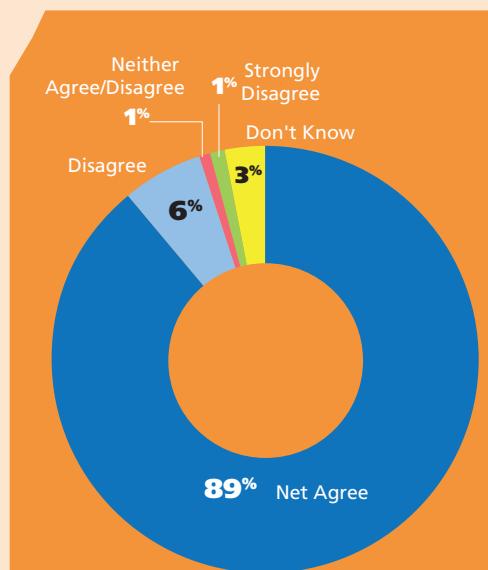
The EPA's role in addressing climate change challenges includes collating national greenhouse gas emissions and projections; regulating emissions from industrial sectors; supporting climate science research; supporting behavioural change and facilitating the National Dialogue on Climate Action.

The 2020 greenhouse gas projections highlighted for the first time that full implementation of the measures in the National Climate Action Plan would result in Ireland complying with its current 2030 EU targets. However, this is only the first step towards Ireland becoming a low carbon and climate resilient society and a rapid and far-reaching transformative change across the energy, transport, land use, agriculture and food, buildings and industry sectors is required. This change could bring opportunities and

co-benefits, ranging from job creation and innovation to improved air quality and human health, reduced traffic congestion and warmer, more efficient homes.

Within the National Dialogue on Climate Action (NDCA) the EPA initiated development of a national behavioural insights framework to support climate action engagement for use by the Government and stakeholders. An important element of this work is development of an understanding of Irish behaviour and attitudes to Climate Change which is underway in collaboration with Yale University.

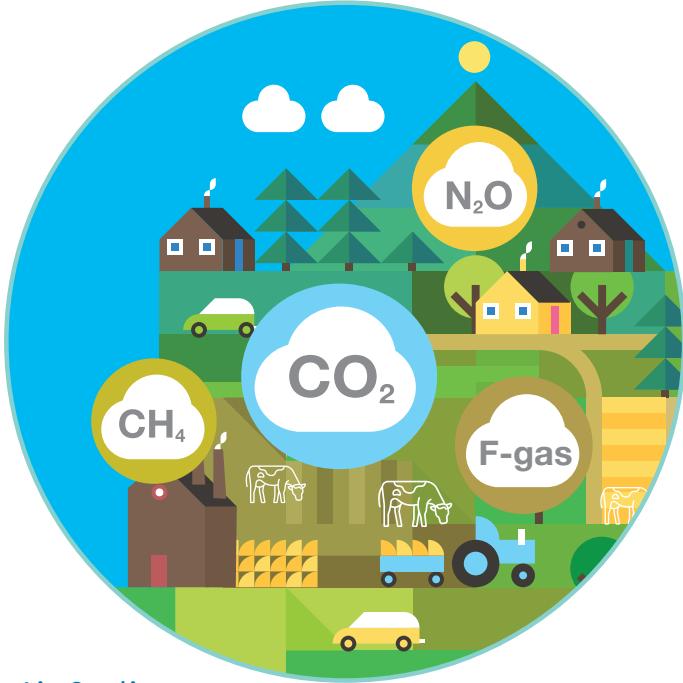
The EPA commenced a 5-year assessment of climate research in Ireland. The aim of this work is to deliver an assessment of our understanding of climate change based on scientific research and systematic observations, which will inform decision making on actions needed to address climate change and research priorities into the future.



**89 per cent of adults agree that the environment is a valuable asset. In addition, 58 per cent said they placed climate change as one of the top three environmental concerns facing Ireland, with one third stating that it affects them personally.**

## Environment and Health

Human health and well-being are closely linked to the state of our surrounding environment, and environmental threats have proved to have a direct influence on people's health and well-being. These threats include hazards such as pollution, radiation and chemicals. The benefit of a clean environment with green and blue spaces are essential components of Ireland's health infrastructure including urban parks, coasts, lakes and rivers, forests and bogs.



### 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 14 stations in 2020, real-time air quality monitoring has nearly trebled in Ireland since implementation of the programme began at the end of 2017. In 2020, the EPA's air quality dashboard was re-developed providing better, easier access and improved interpretation of data. The real-time monitoring data showed a 50% decrease in the levels of the traffic-related pollutant nitrogen dioxide in Dublin city centre during the first national lockdown. The EPA was also successful in securing funding through the EU LIFE programme to enhance public information on air quality, including air quality modelling and development of a 3-day national air quality forecast. This project begins in 2021.

### Radon Gas

To mark European Radon Day in November, the EPA ran a public awareness campaign highlighting radon as an indoor air pollutant. Focussing on counties where extremely high levels of radon have been found, the campaign urged householders to tackle radon and improve their indoor air quality. Also, as part of Science Week 2020, the EPA - in partnership with Wexford Library Service - held an on-line event launching a loan scheme for digital radon monitors in



A recent EPA survey showed that 84 per cent of people said that access to nature (for mental health and exercise) proved vital during the Covid-19 pandemic, with 83 per cent saying access to nature for the purposes of exercise was important for them.

New Ross Library, Co. Wexford. This scheme provided an opportunity for library members to borrow a radon digital monitor in the same way as borrowing a book. Members of the public who had already tested for high radon levels were encouraged to borrow a digital monitor to confirm if levels of radon continued to remain high and with remediation of homes encouraged.



**BORROWING  
A DIGITAL  
RADON  
MONITOR  
FROM YOUR  
LIBRARY**



Recent EPA funded research, by the National University of Ireland Galway (NUIG), concluded that 'passive sumps' show good potential as a radon preventative measure. To confirm their effectiveness in Irish homes, the EPA undertook a field study of passive sumps in 2020, working with a radon contractor in a high radon area. The data from this study will be used to inform the next update of the Building Regulation technical guidance document on radon prevention.

### Non-ionising radiation

As part of its new role in advising on public exposure to electromagnetic fields, the EPA developed advice for the public on 5G and health and on radiation from use of mobile phones, which can be found on the EPA website. A national monitoring programme on exposure to electromagnetic fields was published for public consultation in September 2020.

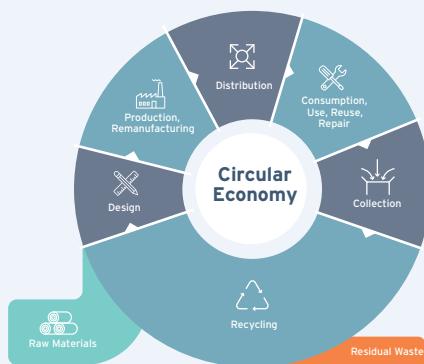
## Waste and Circular Economy

The latest waste statistics indicate that waste generation is increasing across many waste streams. While Ireland is meeting current legislative targets for waste collection, recovery and recycling and diversion from landfill, future targets will be a significant challenge - particularly municipal and packaging recycling.

### Circular Economy

A circular economy is one based on waste reduction, reuse and recycling. While Ireland is meeting current waste targets, recycling rates have levelled off for municipal and packaging waste

and, in some cases, have declined. Waste generation remains high and is linked to economic activity. Having emerged from a series of lockdowns, a 'green' recovery stimulus provides a unique opportunity to generate lasting economic activity that does not over-burden the environment.



### Waste Management

In 2020 the EPA compiled national statistics on waste generation and management in Ireland and published a new waste statistics report. The data showed that while Ireland is continuing to meet all current targets, the more stringent EU targets that will apply from 2025 and 2030 will be challenging.

### Packaging Waste

EPA data on waste packaging management revealed that Ireland continues to generate over 1 million tonnes per year. Despite meeting current EU requirements and achieving high recycling rates in some packaging material

streams such as paper, cardboard and plastic, there are some worrying trends. Recycling rates are on a downward trend with 64 per cent of packaging recycled in 2018, compared with 74 per cent in 2012. Recycling of plastic packaging has dropped for the third year in a row to 31 per cent. Action is needed to help Ireland meet new EU targets in the coming years.

### Hazardous Waste

In December, the EPA published updated data relating to Ireland's generation of hazardous waste with over 581,000 tonnes of hazardous waste produced in Ireland in 2019, an increase of 55,000 tonnes in a year.

### The National Waste Prevention Programme

The National Waste Prevention Programme supports enterprises, households, and the public sector in preventing waste and driving the circular economy in Ireland. In 2020, the EPA invested €1.5m in driving a circular economy in Ireland.



In November, the EPA launched a new campaign to encourage people to take a simple action to reduce food waste, by freezing surplus food before its use-by-date. A recent survey found that 68 per cent of people still say 'passing use-by dates' is the top reason they throw out food at home.

### Enterprise Ireland's Small Business Innovation Research

The EPA's application for Enterprise Ireland's Small Business Innovation Research call was successful and 2020 saw the launch of its innovation project to reduce soft plastic waste within Ireland's school lunch system. This complements the EPA's €600k Green Enterprise Innovation for the Circular Economy Fund which had a growing number of applicants in 2020. This EPA fund provides an opportunity for business and companies to innovate in areas such as food waste, plastics and construction and demolition waste, to provide new products and services.

### MAY



Recent trends in nitrogen dioxide (NO2) levels in air

### JUN

Ireland's ammonia emissions continue to rise and exceed EU limit



EPA National Water Event

epaResearch Climate - Water - Sustainability

EPA announces €600,000 green stimulus fund for innovators & SMEs

### JUL

Ireland's packaging recycling rates move in the wrong direction



Report on Drinking Water Quality in Public Supplies (2019)

### AUG

Circular Economy is Critical to Ireland's Green Recovery

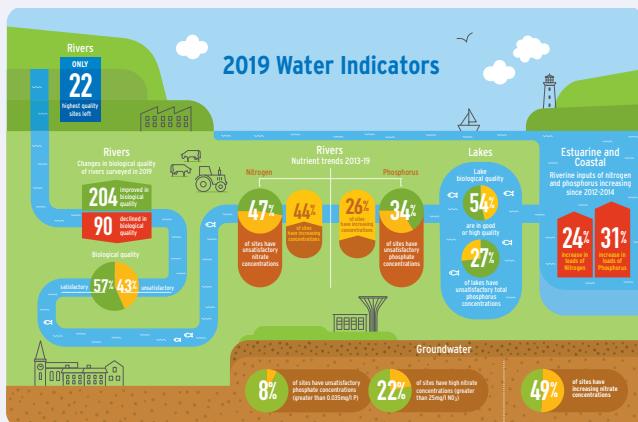


# Water

## Water Quality Monitoring

The EPA's monitoring programmes saw over 13,400 samples collected and analysed during 2020. This represents almost 84 per cent of the original programme planned at the start of the year and allowed the EPA to continue to monitor the quality of Irish water bodies throughout the Covid-19 pandemic.

## Water Quality Indicators



In December, the EPA published the Water Quality Indicators report. The report showed that the main threat to water quality is the presence of too many nutrients, such as phosphorus and nitrogen, which come primarily from agriculture and wastewater. Over one third of rivers, and a quarter of lakes are failing to meet their environmental quality standards for nutrients. Over one fifth of our groundwater, estuarine and coastal water bodies have high nitrogen concentrations. Just over half of rivers and lakes are in high or good biological quality.

## Bathing Water



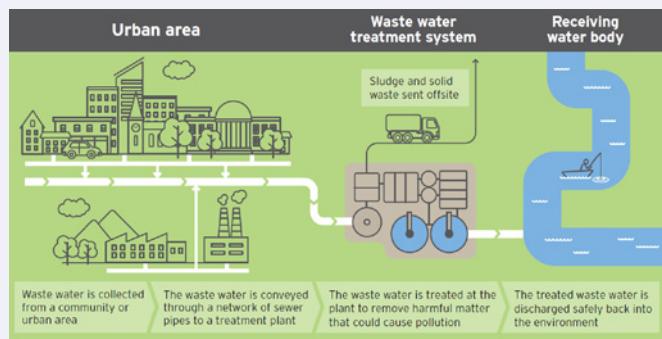
In May 2020, the EPA published the Bathing Water Report highlighting that 95 per cent of

bathing waters met or exceeded the minimum required standard. Unfortunately, Merrion Strand in Dublin has been classified as 'Poor' for the last five years and was 'declassified' in 2020 due to persistent poor water quality. Beaches.ie remained very popular in 2020 with over 150,000 people visiting the website to check bathing water quality.

## Hydrometrics

Working with Met Eireann, the Office of Public Works and Geological Survey Ireland, the EPA published monthly hydrometric bulletins with information on river flows and lake and ground water levels. This data informed the Department led sub-group on drought and helped to inform decision making during this year's dry spell.

## Urban Wastewater



In November, the EPA published a report on Urban Wastewater Treatment. The report found that delays in upgrading treatment systems around the country is prolonging risk to the environment, as well as public health. While some improvements in performance were evident in the past year, raw sewage from 35 towns and villages still flows into our environment every day.

## Drinking Water Quality



The EPA's Drinking Water Quality in Public Supplies Report was published in July and showed that the quality of drinking water in public supplies remained high. Looking to the future however, delays in delivering public water improvements are putting water quality and the public's health at risk. While some progress is being made, multiple failures at the Leixlip water treatment plant in 2019 highlights the serious lack of resilience in water supplies.

## Licensing and Enforcement

Identify main environmental issues for sector

Choose most appropriate enforcement activities

Deliver and measure outcomes

### Licensing

A primary function of the EPA is environmental regulation, including assessment and authorisation of activities across a range of industries including waste, pharmaceutical, the power sector and management of the Emissions Trading Scheme. The number of environmental authorisations made by the EPA in 2020 was 131, compared to 132 last year.

During 2020, licensing and permitting decisions included high profile facility expansions and greenfield investment activities in the pharmachem, food and drink, waste, ICT and power sectors. The EPA held a virtual Oral Hearing, examining the objections and concerns raised in relation to the proposed licence issued to Irish Cement Limited, Castlemungret, Co. Limerick. The EPA appeared before the Joint Oireachtas Committee on Housing, Local Government and Heritage in relation to the Water Abstractions (Environment) Bill and provided evidence and data to assist in the development of legislation in relation to introducing a new water abstracting licensing regime.

The EPA also regulates the use of ionising radiation in Ireland including the medical, dental, veterinary, industrial and security sectors. During 2020, work was completed on the transition of existing radiological licensees to the new graded authorisation system. In parallel, work continued to further embed the graded regulatory approach including the publication of a new code of practice on the use of ionising radiation in veterinary medicine and a review of the EPA's approval model for Radiation Protection Advisers. Regulation of the medical sector during 2020 proved particularly challenging due to the pandemic.

### Licence Enforcement

The EPA currently enforces over 800 industrial and waste licences. Almost 100 of these activities either reduced or ceased production during the Covid-19 pandemic. The EPA's enforcement teams also had to adapt and incorporate Remote Compliance Assessments as well as using a risk-based approach to on-site inspections. Inspectors responded to significant on-site environmental incidents, emergencies and complaints and worked with licensee's remotely for the majority of sites.

The EPA saw an increase in complaints about licensed sites when the pandemic restrictions came into force, mostly odour related. Although three sites accounted for almost half of the complaints received, there was an overall increase across the country. The EPA carried

out 1,089 visits to industrial waste, dumping at sea and VOC facilities. In the case of the three significant sources of complaints, actions were taken by the licensees, following intervention by the EPA, to resolve odour issues at these sites.

### Soil and Stone Waste Acceptance Criteria

In February, guidance on Soil and Stone Waste Acceptance Criteria was published - which set out clear criteria for the acceptance of this waste at licensed sites. A concerted communication and enforcement campaign followed later in the year. This resulted in operators moving away from using inappropriate inert landfill waste acceptance criteria and to improved management of soil and stones.

### Water Enforcement



The EPA enforces water regulations and licences as well as certifications of authorisation in relation to Irish Water. During the pandemic, staff at the EPA, Irish Water and Local Authorities continued to respond to significant on-site incidents, emergencies, and complaints.

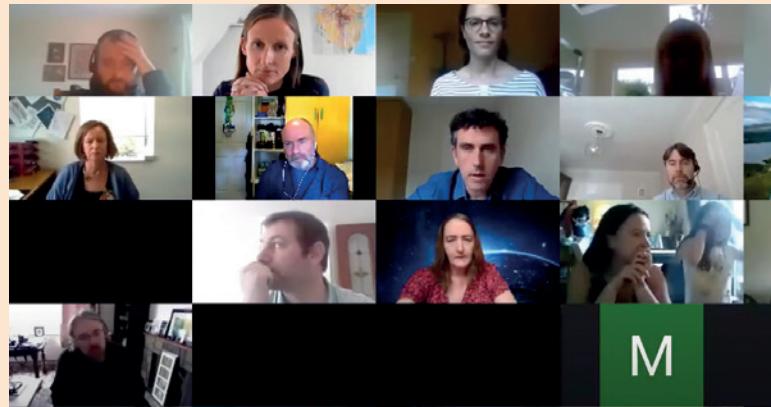
### Online Events

Restrictions during the Covid-19 pandemic forced the EPA to consider how it could continue to increase awareness of environmental issues and work being done to address these issues. One significant innovation was the moving of EPA conferences online with the hosting of virtual events on air pollution, water, waste, circular economy and environment and health. The joint EPA / Irish Centre for Environmental Law conference was also hosted online in 2020. Each of these conferences had larger attendances (in certain cases up to three times the number of attendees) than traditional conferences.

## Citizen engagement

During 2020, the EPA continued its important role of raising awareness and supporting citizen science initiatives. The aim of this is to increase citizen engagement with environmental issues and the gathering of data that can be used for EPA research. The response to projects throughout 2020 reveals the willingness and desire of citizens to get involved in protecting their environment showing their desire to work together to support our efforts to deliver on our environmental commitments and accelerate necessary change.

### GLOBE Citizen Science Programme



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 from monitoring tubes located closest to a main road.

## Clean Air Together Programme



During 2020, a new larger citizen science air quality programme Clean Air Together was developed. This will initially be rolled out in 2021 in Dublin to approximately 1,200 participants who will measure nitrogen dioxide levels in their local area. The pilot scheme for this programme was successfully completed in 2020.

### Dragonfly Ireland and Explore Your Shore Citizen Science Surveys



The National Biodiversity Data Centre continues to implement the *Dragonfly Ireland* and *Explore Your Shore* citizen science surveys in partnership with the EPA. The Dragonfly Ireland survey will result in an updated dragonfly and damselfly map and the Explore Your Shore survey will help improve the knowledge of marine species distribution and explore their use as bio-indicators of water quality and climate change.

Throughout 2020 the EPA continued to work with partner organisations to effect positive outcomes for the environment. This plays an important role in raising levels of awareness and supporting initiatives that increase public engagement with environmental issues.

## SEP



National Statistics Report highlights measures needed to improve Ireland's recycling rates



EPA launches new Air Quality Report

**STOPFoodWaste.ie**  
Bread is Ireland's Most Wasted Food

## OCT



Findings of joint research on the benefits of green and blue spaces for physical and mental health is published



EPA publishes its 7th State of Environment Report

## NOV



EPA encourages homeowners to test their homes for radon



Stop Food Waste launches the 'Eat It or Freeze It' online campaign



EPA published Urban Wastewater Report 2019



Environment Health & Wellbeing Conference. Hosted by the EPA; HSE & ESRI.

## DEC



Ireland's generation of hazardous waste continues to rise



Ireland's Water Quality Needs to be Better Protected

## Competitions and Awards



### 2020 Digital Media Awards

In January, the EPA were the headline sponsor for the 2020 Digital Media Awards. The primary motivation for this sponsorship was reaching a younger audience (18-33 years) and assisting with our social media reach. The EPA also sponsored the 2020 National Student Media Awards in the category for journalism relating to environmental issues. This event enabled the EPA to promote its messages to over 100,000 third level students and their lecturers.

### Partnerships

Throughout 2020 the EPA worked closely with ECO-UNESCO and Junior Achievement Ireland, sponsored an environmental award at the BT Young Scientist, and provided a lesson on 5G in Science and Technology in Action. This work provided opportunities to engage with new and younger audiences, while increasing environmental awareness and promoting the EPA's key messages.

### Greening the EPA



The EPA's Environmental Management System continued to operate effectively and successfully achieved recertification of the ISO14001 standard during 2020. The 2020 Environmental Management Programme delivered improvements in Energy Performance, Waste, Hazardous Waste Management, Transport, Biodiversity and Water. The number of Electric Vehicle (EV) charging points, fully Electric Vehicles increased, and we purchased our first fully electric van.



### Story of Your Stuff Competition

The EPA's fourth 'Story of Your Stuff Competition' for secondary schools was completed in June 2020. The EPA received more than 120 entries from schools across the country, highlighting the environmental impact of everyday items or activities and students creatively told their stories through visual mediums. The competition encourages use of the environmental information available on Ireland's Environment and the EPA website to complete their projects. This year's winning students were from St. Andrews College, Booterstown, Dublin.



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



**EPA Board:** Dr Tom Ryan, Dr Eimear Cotter, Mr Gerard O'Leary, Ms Laura Burke (Director General), the late Dr Ciara McMahon and Dr Micheál Lehane

View organisation structure at: [www.epa.ie/about/org/](http://www.epa.ie/about/org/)

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National Environmental Complaints:  
T: 1850 365121  
App: See it? Say it?

