

Memorandum of Understanding Health Service Executive

Environmental Protection Agency

The objective of this Memorandum of Understanding is to set out areas of mutual responsibility and shared purpose between the Environmental Protection Agency and the Health Service Executive and to set out the framework for mutual ∞ -operation in achieving their respective objectives.

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1. Introduction

In recognition of their mutual commitment to protect and enhance human health & the environment and to provide effective public service this Memorandum of Understanding (MoU) establishes a co-operative framework between the Health Service Executive (HSE) and the Environmental Protection Agency (EPA). In recognising each organisation's respective statutory responsibilities and obligations, the HSE and the EPA shall endeavour to co-operate closely particularly in relation to the following:

- Developing stronger and more robust approaches to understanding and promoting the essential role that protecting the environment plays in improving the health of the population.
- Agreement and implementation of any complementary actions in accordance with the objectives of the HSE Climate Action Strategy 2023-2050.
- Delivering a protected and healthy environment with cleaner water, cleaner air and reduced exposure to harmful radiation, noise, chemicals, and pathogens.
- Protecting people from environmental threats to their health and wellbeing by applying a
 One Health lens to attain optimal health for people.
- Increasing the research and knowledge base of the Environment and Health.
- Promoting the transition to sustainable production and consumption.
- Implementation and enforcement of the different legislative areas identified in this MoU.
- Co-ordination and consultation on national and EU technical positions, working groups and meetings.
- Agreement and implementation of joint and complementary actions in accordance with the goals of the Healthy Ireland Framework for Improved Health and Wellbeing 2013 -2025, the National Radon Control Strategy 2021-2024, the Health Protection Strategy 2022-2027¹ and the HSE implementation plan for Healthy Ireland and any subsequent iterations of these strategies.

1.1 Environmental Protection Agency

The EPA is an independent public body established under the Environmental Protection Agency Act, 1992. The EPA's purpose is "*To protect, improve and restore our environment through regulation, scientific knowledge and working with others*" and the EPA's vision is that "*We live sustainably in a healthy environment that is valued and protected by all*".

The EPA's purpose is reflected in its 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 its advocacy and commitment to collaborating and partnering with others to deliver better environmental outcomes.

¹ HSE Health Protection Strategy 2022 2027.pdf (hpsc.le)

The EPA Strategic Plan 2022 – 2026 sets out what the EPA will do drive action on climate, promote sustainable consumption and production, and achieve a clean, healthy environment. In delivering an effective voice for Ireland's environment, EPA is an independent and transparent source of environmental evidence and information and works with others and proactively seeks to influence policy, legislation and behavioural change to improve the environment. EPA also uses its knowledge to drive and inform climate action through its evidence and engagement work. In addition, EPA is leading by example in reducing its greenhouse gas emissions.

Through EPA regulation, enforcement, monitoring and assessment work the Agency works to deliver cleaner water, cleaner air and reduced exposure to harmful radiation, noise, chemicals and pathogens. EPA also promotes the transition to sustainable production and consumption to the public and businesses to promote use of less resources and better choices for the environment. EPA also seeks to create a culture of excellence where staff are supported and can give their best in a supportive, inclusive and flexible workplace.

In delivering on a dean, healthy environment, the EPA has responsibilities for a wide range of licensing, enforcement, monitoring and assessment activities associated with environmental protection and protection of people from the harmful effects of ionising radiation, both natural and man-made. Under its environmental protection mandate, EPA delivers direct and indirect benefits to human health through a number of its responsibilities. These include:

- controlling emissions from licensed facilities.
- regulating public drinking water provision and maintaining a supervisory function over local authorities regarding the provision of 'safe and secure' drinking water.
- monitoring ambient air quality in Ireland.
- monitoring radioactivity levels in food, soil, air and water and regulating the use of ionising radiation.
- Providing advice to the public and to Government on radiological protection issues.
- Enforcement of environmental law.
- Environmental education and guidance.
- Regulating & reporting Ireland's greenhouse gas emissions.
- Monitoring, analysing and reporting on the State of the Environment.
- Environmental research coordination and development.
- Circular Economy; and
- Strategic environmental assessment.

Other activities with relevance include licensing release of Genetically Modified Organisms (GMOs); reporting bathing water quality; action on radon awareness; and funding a significant programme of research in the Environment & Health area.

1.2 Health Service Executive

The HSE, established under the Health Act 2004, is the single national body responsible for the provision of health and personal social services to the population. The object of the Executive is to use the resources available to it in the most beneficial, effective and

efficient manner to Improve, promote and protect the health and welfare of the public (Health Act 2004, Section 7 (1)). It is the largest public or private sector organisation in Ireland.

The HSE has statutory and non-statutory responsibilities for the management of environmental impacts on human health. This work is led by the following services and units within the HSE; National Environmental Health Service, Public Health, Health and Wellbeing with support from HSE Laboratory Services. This work is carried out in cooperation with many other agencies such as local authorities, the Food Safety Authority of Ireland (FSAI). Uisce Éireann and the EPA.

HSE Strategy and Research team was established in June 2021 arising from new governance arrangements for the health services. The work of Strategy & Research is focused on long-term, multi-annual planning to develop a more sustainable health service, improve efficiencies, and value and improve the health and wellbeing of the population. The function works closely with community and acute planning teams and operational functions to support transformational change in the health service.

The establishment of this function in the HSE provides an opportunity for Health and Wellbeing reforms to be embedded into the core strategic planning capability of the organisation. This restructuring places responsibility for prioritising and coordinating Healthy Ireland implementation in the Office of the Deputy Director General, Strategy and Planning and is being led by the National Director for Strategy and Research.

The HSE developed a Climate Action Strategy in 2023 and is developing a Climate Action Office that will assist in the delivery of the strategies objectives. Key focus will be on actions to reduce our carbon emissions, promoting low-carbon and sustainable solutions which limit pollution, helping to reverse biodiversity loss, and supporting, and protecting the health and well-being of current and future generations which includes adapting and becoming resilient to the impacts of climate change.

The National Health Protection Service of Ireland is the national Public Health service tasked with statutory protection of the public's health from All-Hazards, including notifiable infectious diseases, hazardous chemicals, and radiological and radio-nuclear hazards. The legal basis includes the Infectious Diseases Regulations 1981 Articles 11 & 19, and the Health (Duties of Officers) Order 1949. The Implementation of the Adaptation and Resilience objectives of the HSE Climate Action Strategy is led by Public Health.

The National Environmental Health Service (NEHS) has as its primary role, that of a regulatory inspectorate responsible for a broad range of statutory functions enacted to protect and promote the health of the population i.e. alcohol control, food safety, import control, tobacco and related products control, cosmetic product safety, sunbed regulation, fluoridation of public water supplies, drinking and bathing water quality investigation, International Health Regulations, infectious diseases investigations, pest control, planning/ environment. These functions include activities such as licensing, surveillance, complaint investigation, inspection, documentary checks, audit, sampling, enforcement, consultation, advice, education, research and advocacy.

2. Purpose of Memorandum of Understanding

The HSE and EPA jointly affirm their commitment, in the interest of the protection and enhancement of human health and the environment to develop effective working relations so as to ensure that the best possible service is delivered. This MOU provides a framework to facilitate cooperation between the two agencies in the area of Environment, Radiological Protection and Health.

The memorandum does not override the statutory duties and powers of either organisation. The memorandum expresses a convergence of will between the parties, indicating an intended common line of action, rather than a legal commitment.

2.1 Operational Liaison

The EPA Director with responsibility for Environment and Health and the HSE National Director for Strategy and Research shall meet twice a year to assure themselves that the Memorandum is being implemented. In addition, there shall be an annual forum of key representatives of the HSE and EPA to agree work programmes, review progress of working groups established by them and generally monitor and review the implementation and effectiveness of this MoU. This forum shall be known as the HSE/EPA Co-ordination Group and it shall be held in either the HSE or EPA offices or online as appropriate.

The members of the HSE/EPA Co-ordination Group from the HSE shall at a minimum include National Directors or Assistant National Directors or their representatives for Strategy and Research; Public Health; Environmental Health; Emergency Management; Health & Wellbeing; Health Improvement and HSE Programme Manager for Climate Action and the Clinical Lead for the AMRIC programme.

The members of the HSE/EPA Co-ordination Group from the EPA shall at a minimum include Directors, Programme Managers or their representatives responsible for Environment & Health; Research; Air Quality & Chemicals; Climate Science & Evidence; Nuclear Safety, Radon and Emergency Preparedness; Drinking Water and Bathing Waters.

The HSE/EPA Coordination Group will consider the effectiveness of the implementation of the MOU and identify any barriers to or recommendations for further opportunities for cooperation if relevant. Where appropriate, representatives from each organisation will refer such matters to other parts of their organisations, for consultation and direction in line with the respective organisational policy & governance for each body.

Existing work structures for delivery on shared objectives where effective will remain. In addition, working groups may be established in these areas in accordance with terms of reference to be agreed by the HSE/EPA Coordination Group. Where appropriate these working groups may by agreement include other relevant organisations. The output, duration and terms of reference of each group will be periodically reviewed by the HSE/EPA Coordination Group. The HSE and EPA may from time to time agree to make other arrangements to examine additional matters of common interest via other mechanisms.

2.2 Principles of Cooperation

The two organisations recognise that their relevant strategies may be most effectively implemented on a collaborative basis and so agree to cooperate on the following as appropriate:

- areas of common purpose.
- joint programmes that will enhance the environment and health of the population.
- Collaboration on guidance on environment and health issues of mutual concern.
- scientific/medical/technical co-operation and linkages between both parties.
- working groups / committees to assist both parties deliver on their objectives.
- coordinate between research programmes including research award schemes.
- exchange of research activities and data as appropriate and within guidance of GDPR.

The areas of common purpose between the HSE and the EPA are listed below and are also described in more detail in Appendix 1. These areas shall be the focus of the cooperative approaches outlined above.

- 1. Promotion of Environment, Health and Wellbeing
- 2. Climate Action
- 3. Bathing Water and Drinking Water Quality
- 4. Regulation of Industrial, Waste, Ionising Radiation and Other Activities
- 5. Air Quality
- 6. Incident Response
- 7. Environment and Health Research
- 8. Radon
- Chemicals
- 10. Greening Procurement
- 11. Circular Economy & Resource Efficiency
- 12. Antimicrobial Resistance
- 13. Other areas of common interest

Other areas may be identified where collaborative action is advantageous and these will be addressed via the HSE/EPA Coordination Group.

2.3 Memorandum of Understanding Review

This MOU will be valid for five years. During its fifth year the HSE/EPA Coordination Group shall review its operation and make recommendations for any further iteration of the Memorandum of Understanding or on amendments to its contents.

An earlier review of the MOU may be requested by a National Director of HSE or the Director General of the EPA on foot of emerging issues or in order to allow for additional opportunities to build on existing cooperative efforts.

2.4 Confidentiality/Intellectual property

The rights of the two organisations to restrict information regarded as confidential under each organisation's relevant legislation will be respected at all times. Both parties shall maintain full right title and interest in any intellectual property right in any work product developed solely by them under this memorandum.

The organisations may enter into data sharing agreements to progress the achievement of better health protection. There shall be no exchange of unconsented public health data unless it meets the legal requirements for which it was collected.

Appendix 1: Areas of Common Purpose

1. Promotion of Environment, Health and Well-being

Health impacts from the environment are not only about protecting citizens from harmful environmental conditions (pollution). It is critical to also recognise the benefits to health and wellbeing that accrue from a high-quality environment with clean air, safe waters and flourishing green & blue spaces. When ecosystems are maintained in good condition, they provide direct health benefits: a growing body of evidence demonstrates the value of contact with nature in the prevention/treatment of conditions including stress, depression and obesity. National ambitions on sustainable development are closely aligned to the goals in Healthy Ireland to 'increase the proportion of people who are healthy at all stages of life'.

EPA Role

EPA's wide-ranging programmes of environmental monitoring and regulation are driven by the vision to achieve a healthy environment that is valued and protected by all. Through other activities including guidance, knowledge & advocacy roles; and through targeted research funding, the EPA takes a proactive approach to supporting sustainability and well-being. Future EPA State of the Environment reporting will highlight this topic, and conferences will be organised with HSE to stimulate debate & action in the area. The EPA via its citizen science programme works to highlight the impact of air quality on health.

HSE Role

The work of the HSE Health and Wellbeing team is focused on helping people to stay healthy and well, reducing health inequalities and protecting people from threats to their health and wellbeing. Public Health legislation requires Medical Officers of Health to improve and protect the health of the population. The National Environmental Health Service has its primary role the enforcement for a broad range of environment and health statutory functions enacted to protect and promote the health of the population.

Collaboration

The HSE will continue to collaborate with the EPA and the ESRI in the annual Environment, Health and Wellbeing Conference and will seek to leverage it to showcase research on emerging risks, areas of interest and collaborative projects. The HSE will continue to participate in the EPA Health Advisory Committee which provides advice on the direction of environment and health work of the EPA. HSE will also continue to provide guidance on the content and direction of EPA research funding activity on the area of Environment and Health.

2. Climate Action

Climate change impacts are projected to increase in the coming decades and during the rest of this century. Uncertainties remain in relation to the scale and extent of these impacts, particularly during the second half of the century. Predicted adverse impacts include more intense storms, increased likelihood of river & coastal flooding, adverse impacts on water quality and increased heat stress.

There is a requirement for a coordinated approach from the health and environment sectors in assessing and preparing for climate change impacts (e.g., link to emergency planning, water supply, food supply and safety, vector control, and social protection). In addition, we must deliver on the requirements within the Government's Climate Action Plan 2023.

In addition, responding to climate change will require action to address carbon emissions collectively and individually as organisations.

EPA Role

The EPA provides and supports development of evidence and knowledge to drive climate action in Ireland including compilation and reporting of national emissions statistics, climate adaptation, climate research, climate science, international engagement on climate change and behavioural insights and engagement.

The EPA compiles and reports Ireland's greenhouse gas emission inventory and projections on an annual basis to meet Ireland's EU and UNFCCC obligations. These figures meet the requirements of the Climate Action and Low Carbon Development Act, as amended, and inform the monitoring of Ireland's climate action performance. The EPA also plays a key role in adaptation governance and implementation structures by delivering across the areas of climate risk, climate services and evidence and knowledge. This includes providing technical support for climate adaptation in Ireland by developing and delivering Climate Ireland (www.climateireland.le), Ireland's National Adaptation Platform. EPA also provides associated guidance and tools for policy makers, local authorities (planners, climate officers, engineers) and sectoral adaptation leads and developing Ireland's climate adaptation network.

The EPA is leading the delivery of Ireland's First National Climate Change Risk Assessment to prioritise climate change impacts and actions across all sectors. The insights gained through the EPA's 'Climate Change in the Irish Mind' study of Irish population's beliefs, attitudes, policy preferences, support climate change awareness and engagement campaigns and the design of national policy and climate action. The EPA supports international climate science development and represents Ireland as members of the national delegation in engagement with the United Nations Framework Convention on Climate Change and Intergovernmental Panel on Climate Change processes.

The EPA develops climate research capacity through the EPA Research Programme leading on national climate change research and in engagement with European programmes under Horizon Europe and JPI Climate which explore Ireland's emissions pathways and scenarios for energy use and other sectors and supports adaptation planning through environmental monitoring and reporting programmes.

The EPA supports Ireland's membership of the Integrated Carbon Observation System - European Research Infrastructure Consortium as the National Focal Point. The EPA is the enforcement and implementation authority for the EU Emissions Trading System in Ireland and as part of this system implements the EU rules for harmonised free allocation of carbon emission allowances. The EPA also works to integrate climate resilience and adaptation priorities across EPA work areas to optimise co-benefits for the environment and public health

focusing on water quality and quantity, Environmental Licensing, and incorporating climate change risk into emergency preparedness.

In addition, EPA has a role in the development of guidance for Climate Action Roadmaps² that each public sector body must develop setting out how it will deliver on its energy efficiency and emissions reduction targets. The EPA is committed to leading by example and incorporating good environmental management and practice in everyday activities. The EPA aims to minimise the environmental impact of its own activities to achieve continual environmental improvement, to prevent pollution, to measure and reduce its GHG emissions, adapt to climate change, and encourage environmental awareness within the Agency.

The EPA's strategic plan commits to achieving a minimum of 30% reduction in GHG emissions by 2026 and has set out its actions to achieve this in its Climate Action Roadmap. In delivering on its environment and climate objectives, the EPA operates and maintains an ISO 14001 certified Environmental Management System (EMS) to integrate good environmental management and practices into everyday activities.

As part of the EMS, the EPA has identified direct, and Indirect environmental aspects associated with work-related activities. Using a risk and priority scoring mechanism, certain aspects are considered 'significant' and given priority for action or other controls put in place to mitigate impacts within the annual Environmental Management Programme. Other activities also highlighted for action in this annual Programme include green procurement; environmental education and awareness for staff; transport and continuous improvement & assurance which is supported by robust and accurate data.

HSE Role

The HSE as a large public body has developed an ambitious Climate Action and Sustainability Strategy 2022-2050. The strategy will be delivered through a series of detailed Implementation Plans. The implementation of the Strategy will be enabled by a suite of frameworks and supporting Implementation Plans targeting priority areas of focus. During the period to 2025, the Department of Health and the HSE will develop a successor to the 2019 Health Sectoral Adaptation Plan, informed by the review of the National Adaptation Framework, as well as domestic and international developments. Alongside the EPA, HSE as a large public sector body will be preparing and implementing its Climate Action Roadmap.

Public Health is also involved in the Climate Change Advisory Council – Adaptation Committee and the National Adaptation Steering Committee and uses every opportunity to advocate on preventing the public health impacts of climate change across all departments and agencies external to the HSE.

The HSE Climate Action Plan sets out six priority areas of focus namely:

- Sustainable Buildings and the Green Environment
- Transport and Mobility
- Sustainable Procurement.

² Public Sector Bodies Climate Action Roadmaps Guidance.pdf (seai.ie)

- Green Models of Health Care
- Water and Waste Management
- Adaptation and Resilience

Within these six areas 10 strategic objectives have been defined:

Sustainable Buildings and the Green Environment

- **<u>\$01</u>** Achieve a 50% reduction in energy usage, a 51% reduction in energy related GHG emissions by 2030 and a net zero emission target by 2050 (at latest).
- <u>\$02</u> Develop a HSE green space framework and implementation plan to optimise the use of green space for the promotion of the health and well-being of patients, staff and the local communities.

Transport and Mobility

- <u>\$03</u> Develop a HSE Transport framework and implementation plan to eliminate, reduce, and substitute transport emission sources associated with delivering and accessing health care.
- **<u>\$04</u>** Develop a mobility framework and Implementation plan to promote travel Initiatives to avoid unnecessary patient and staff journeys. Where journeys are required, support and encourage active travel, low carbon or public transport alternatives.

Sustainable Procurement

- <u>\$05</u> Develop a procured goods and services waste reduction framework and supporting implementation plan to reduce waste and related emissions, strengthen supply chain resilience and support the transition towards a circular economy.
- <u>\$06</u> Develop a baseline for all HSE supply chain emissions and work in consultation with key supply chain and product partners to include sustainability criteria in all tender procurement processes and establish a credible decarbonisation trajectory.

Green Models of Health Care

<u>\$07</u> - Develop a framework for greener models of health care delivery and supporting implementation plan to reduce the environmental impact of the delivery of models of care, pharmaceutical products / services used while continuing to prioritise patient safety, prevention, and population health.

Water and Waste Management

- **<u>\$08</u>** Develop a HSE waste management framework and implementation plan to minimise food waste generation, increase recycling and reduce the amount of clinical waste generated.
- **<u>SO9</u>** Develop a data-driven water consumption framework and implementation plan to report and manage water consumption and conservation measures to reduce wastage.

Adaptation and Resilience

<u>\$510</u> - Ongoing implementation of the measures set out in the Department of Health Sectoral Adaptation Plan 2019-24 and all subsequent plans.

Cooperation

EPA and HSE will collaborate on climate action via existing engagements and via the engagements set out in this Memorandum relating to procurement and circular economy. Moreover, the two organisations will share their experiences as public service organisations in Implementing actions within their own Climate Action Roadmaps. Where appropriate EPA will inform HSE of work by other stakeholders that it becomes aware of in the implementation of its roles relating to climate action that could assist the HSE will the delivery of its Climate Action Plan.

3. Drinking Water and Bathing Water Quality

Both drinking water and bathing water can be sources for waterborne diseases. Drinking water may also impact on health due to the contamination of the water with harmful substances.

EPA Role

The EPA is the responsible agency for the enforcement of drinking water quality standards in public supplies in Ireland. It also reports on drinking water and bathing water monitoring with certain samples being analysed in the HSE Public Analyst Laboratories. The EPA is also responsible for monitoring radioactivity levels in drinking water, bottled water and seawater. EPA also reports annually on the status of bathing waters in Ireland with respect to the microbial standards set in the Bathing Water Directive.

HSE Role

- The HSE acts as a statutory consultee for local authorities under the EU (Drinking Water) Regulations in the event of exceedances. The HSE first point of contact is the National Environmental Health Service.
- Under Infectious Disease Legislation the Medical Officer of Health has responsibility and authority to investigate and control notifiable infectious diseases and outbreaks some of which may be waterborne.
- Through Public Health statutory investigation and control activities, public health risk assessment or disease surveillance, the HSE may identify water as a source of infection or contamination and threat to public health.
- The HSE National Environmental Health Service and Public Health when notified by local authorities may provide advice with respect to incidents of microbiological pollution and/or other adverse circumstances which may impact on bathing water quality and health
- The HSE National Environmental Health Service, may undertake water sampling programmes as part of their food safety responsibilities that may identify problems with drinking water quality.
- The HSE National Environmental Health Service, Public Analyst Laboratories and official Microbiology Laboratories may act as agents of the Water Services Authorities for the purposes of sampling and testing of drinking water and bathing water in a small number of locations.

Collaboration

The EPA interacts with the HSE formally under the EU (Drinking Water) Regulations, where there is a potential danger to human health and on other public health issues relating to drinking water and water quality.

The drinking water regulations require Water Service Authorities to Immediately investigate any exceedance of a drinking water parameter and to notify the EPA. The Drinking Water Regulations (Regulation 15 of 99/2-23) obliges both the Water Services Authority and the EPA to consult with and get the agreement of the HSE with respect to any remedial action and measures to protect public health – this involves Public Health-Health Protection and the National Environmental Health Service.

While respecting the respective roles of EPA and HSE, there is a long history of collaboration between EPA and HSE on drinking water in protecting the health of consumers. To this end, the HSE/EPA Drinking Water Liaison Group develops guidance and joint policy on drinking water related issues. Where merited, EPA and HSE staff jointly attend inspections of drinking water facilities to facilitate information sharing and share expertise. The HSE/EPA Drinking Water Liaison Group will consider if its role should be expanded to include broader water quality areas including Water Safety Plans, Water Framework Directive, and septic tanks (Including on-site wastewater treatment systems) during the period of this Memorandum.

4. Regulation of Industrial, Waste, Ionising Radiation & other activities

Licensed activities are required to conform to best practice and all licenses, authorisations and permits are routinely monitored to ensure ongoing compliance with requirements. In carrying out its regulatory functions the EPA must have regard to the protection of human health and the environment. Both HSE and EPA have a shared commitment to ensuring that risks arising from the use of sources of ionising radiation in a medical context are kept to a minimum.

EPA Role

The EPA is responsible for regulating activities that have significant polluting potential. Specific responsibilities encompass:

- Industrial Emission Directive Licensing
- Waste and IPC Licensing
- Waste Water Discharge Authorisation
- Emissions Trading
- Contained use and deliberate release of GMOs
- Volatile Organic Compounds permits
- Dumping at Sea permits
- The use of ionising radiation (responsibility for workers and members of the public)

EPA is the regulator of the use of lonising radiation by HSE. This regulatory engagement is not subject to this Memorandum of Understanding.

HSE Role

EPA is obliged to inform the HSE of licence applications and reviews. The HSE informs the licensing process with regard to environment and health, with the purpose of promoting and protecting human health. HSE contributions are made using a broad range of knowledge and skills including:

- knowledge of the interaction of licensed facilities and local communities and their facilities.
- knowledge of local environmental conditions and vulnerability including water, air, soils, industry and residential mixes.
- assessment of potential public health nuisance.
- assessment of risk to human health including vulnerable groups.
- and advocating for an environment that promotes health and wellbeing.

Collaboration

The EPA will continue to consult with the HSE on all Licence applications and Licence reviews received. The HSE will continue to make submissions to the EPA in the Licensing process to inform the EPA of any potential risks to population and/or environmental health.

5. Air Quality

Air pollution is the single biggest environment health risk in Europe. It is estimated that there are approximately 1,300 premature deaths in Ireland³ due to poor air quality from fine particulate matter (PM_{2.5}). In September 2020, the WHO revised down their air quality guideline values for certain air pollutants to protect human health, which highlights the need to improve air quality.

EPA Role

The EPA is one of the competent authorities for EU and Irish air quality legislation and has overall responsibility for the co-ordination of ambient air quality monitoring in Ireland. EPA manages the National Ambient Air Quality Monitoring Network of 115 stations across the country (www.airquality.ie), with some stations maintained directly by the EPA and some by other bodies (Local Authorities, etc.). EPA reports annually on Air Quality in Ireland and reports on air emissions under the National Emission reduction Commitments Directive. EPA is also responsible for monitoring radioactivity levels in air.

HSE Role

The HSE is one of the prescribed bodies in the Air Quality Standards Regulations 2011 (SI 180 of 2011) and works with the EPA and other agencies to implement the CAFÉ (Clean Air for Europe) Directive, to advocate for clean air, to alert the public and vulnerable groups to air quality issues. The HSE supports local authorities in the interpretation of "air pollution" under the health criterion. HSE Public Health responds to air quality incidents on a case-by-

³ ETC-HE Report 2022/10 - Health Risk Assessment of Air Pollution and the Impact of the New WHO Guldelines, European Environment Agency 2022

case basis when there are public health concerns, developing public health information and advice on preventive measures and communicating the risk to key health and other professionals as well as to the public. The HSE Public Analyst Laboratories may act as agents of the Local Authorities to assist with queries on air quality.

Collaboration

EPA and HSE have been collaborating over many years to highlight and communicate the impact of air pollution on health. The Air Quality Health Information Working Group established in 2010 comprising EPA, HSE, Met Éireann, the Department of Environment, Climate and Communications (DECC), and Dublin City Council has been the main vehicle for collaboration between HSE and EPA on matters regarding air quality.

In addition, HSE has supported EPA citizen science work on air quality to highlight the impacts of poor air quality on health. There is substantial engagement between HSE and EPA on the Air Quality Index for Health, communications around air quality and its impacts as well as the EU LIFE Emerald project which provides a national air quality forecast for Ireland.

Both parties are committed to continued collaboration via the Air Quality Health Information Working Group and other engagements on air quality impacts. Both parties will continue to maintain and develop work on the Air Quality Index for Health, air quality citizen science work; air quality forecasting; and communications with the public and stakeholders on air quality generally and in the event of significant ambient air quality incidents.

6. Incident Response

Ireland's Strategic Emergency Management National Structures and Framework provides the basis for a national-level strategic emergency management and sets out the supports required should such emergencies occur. It attaches lead responsibility to the relevant Government Department and Agency depending on the nature of the event. This concept also recognises that there are multiple support agencies involved depending on the incident.

For major emergency events arising from environmental and radiation incidents (excluding malign CBRN events) the lead government department is DECC, and the lead agency is the relevant local authority/authorities. A separate Major Emergency Management Framework provides support for the local and regional response to an incident by the principal response agencies (An Garda Síochana, HSE and Local Authorities).

A dedicated National Plan for Nuclear and Radiological Emergency Exposures (the 'National Plan') sets out details of Ireland's planning and preparedness for a national response to a nuclear or radiological emergency. Lead responsibility for the National Plan lies with DECC, with other government departments and agencies, including the EPA and the HSE, assigned specific roles and responsibilities. The arrangements outlined in this MoU shall not alter those outlined under the National Plan. In addition, EPA and HSE are included in the Major Emergency Management working draft protocol for multi-agency response (currently under review by DECC) and will act in accordance with the protocol when finalised.

Environmental and radiation incidents of significant consequence for the EPA and HSE can occur which, while not triggering the activation of major emergency plans or the National Plan across the lead government departments/support agencies, still require the immediate attention and cooperation of the EPA and HSE. The two agencies will cooperate where necessary in the response to such emergencies and incidents to provide technical and public health advice, respectively.

EPA Role

The EPA has a MoU with the Department of Housing, Local Government and Heritage which sets out the arrangements between the Local Authorities and the EPA for environmental emergency management.

For nuclear and radiological emergencies, the EPA's roles are to:

- Install, operate and maintain a national radioactivity monitoring network.
- Provide an on-call emergency service for the response to a notification concerning a nuclear accident received by the National Contact Point (An Garda Síochána).
- Provide a technical assessment of the potential or actual consequences of a nuclear accident or radiological emergency and the potential measures that could be taken to minimise the radiation exposure to people.
- Work with other organisations such as the Civil Defence, Department of Agriculture, Food and the Marine, the Food Safety Authority of Ireland and Met Éireann for the collection of samples of environmental, foodstuffs, drinking water and other samples for analysis.
- Provide accurate and specific information to the public to include details of the accident and its consequences and any protective actions which are recommended to minimise exposure to radiation as part of a co-ordinated response.
- Provide advice on the potential consequences of radiation emergencies and to set out protective measures that can be taken.
- Provide radiological protection advice, including advice on the results of dosimetric assessments.

In addition, the EPA has roles directly related to the HSE including:

- Supporting the HSE by Invoking the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency if required to obtain international assistance with the treatment of potentially exposed persons.
- Cooperating with the HSE in the preparation of protocols for decontamination, population monitoring and population protective actions.
- Supporting the HSE in organisation of training and exercises for HSE staff on response to radiation emergencies.

HSE Role

The Department of Health is the lead government agency for major emergencies arising from infectious disease and biological events. The HSE is one of the three principal response agencies who plan for and respond to major emergencies in accordance with the Major Emergency Management Framework. Inherent in this interagency cooperation are joint policies, procedures, training and exercises. As part of the Framework the three agencies work with other stakeholders and responders to ensure other roles are understood and incorporated within relevant procedures and training. HSE Public Health is involved in the prevention, response and follow-up of all significant incidents, regardless of hazard type – responsible and authority for notifiable infectious diseases, public health risk assessment and provision of advice for other hazards.

Collaboration

In the event of a nuclear emergency abroad, the HSE National Environmental Health Service would provide food and pharmaceutical imports to the EPA to measure for radioactivity. In addition, the HSE has a role in the case of a missing or stolen radioactive source in Ireland. Where any such situation arises, the EPA will:

- inform the HSE to prepare for the possibility of members of the public presenting with suspected exposure/contamination from the missing source.
- assist HSE in obtaining international assistance through the IAEA if needed.
- support the HSE in the public health risk assessment and development of its public health advice in the context of a nuclear accident via the provision of expected doses from an accident. To inform this work EPA will work with HSE to plan the responses to scenarios as part of joint action on preparedness.

If requested by the EPA, HSE may assist in incidents where there is a need for:

- Identification of the population exposed (those injured: those potentially harmed who
 may need health surveillance; and those who are unharmed or who may experience
 transient effects and who need full information).
- Assessment of the risk to public health.
- Risk communication and guidance to key health professionals and to the public.
- Toxicology advice.

Animal/Human Health Protocol

The primary responsibility for human health investigations lies with HSE Public Health and where appropriate the National Environmental Health Service within the HSE and for animal health primary responsibility lies with the regional veterinary office of the Department of Agriculture, Food & the Marine. Other relevant bodies are invited to participate in these investigations; for example, where environmental factors are considered to be involved, the local authority or the EPA may be invited to join the investigations. Protocols are in place for the investigation of serious animal and/or human health problems – the Public Health cluster

investigation guidance⁴ was updated in 2019 and the FSAI Management of Outbreaks of Foodborne Illness Document is in place since 2016⁵.

7. Environment and Health Research

Research has an important role to play in enhancing human health through a healthy environment.

EPA Role

The EPA manages an environmental research programme that delivers essential scientific support for environmental policy development, implementation and broader decision making. Since 1994, the EPA has funded research that has increased national understanding of our environment, the challenges it faces and responses to these. EPA Research focuses on achieving environmental objectives, informing policy and bringing together researchers and research users.

EPA is also a member of the European Commission's Euratom Programme Committee (Fission configuration) and will provide HSE with relevant updates on the Committee's activities. Euratom Research and Training Programme (2021-2025) is a complementary research programme to Horizon Europe, for nuclear research and training, including in the areas of radiation protection and development of medical applications of radiation.

HSE Role

HSE Public Health and National Environmental Health Service identify priority public health issues with evidence gaps, that require further research, and supports the research community in answering important questions for protection of public health.

Collaboration

The EPA's Research 2030 framework includes 'Delivering a Healthy Environment' as one of its four interconnected research hubs. Maximum value is realised from this work when there is close co-operation between the EPA and the public health bodies. Moreover, the other hubs, namely, 'Facilitate a Green and Circular Economy', 'Protecting and Restoring our Natural Environment' and 'Addressing Climate Change Evidence Needs' will be of increasing interest to the HSE as it implements its Climate Action Plan.

The HSE contributes to the EPA Research Programme through inputting to the selection and scoping of relevant research topics and evaluation of proposals at the pre-award stage, as well as participating in project steering committees and reviewing research outputs for funded projects where appropriate. The HSE will continue to contribute to and support the EPA Research Programme in this way and, where appropriate, the HSE may facilitate data provision to researchers working on environment-health projects. Furthermore, the HSE may

⁴ https://www.hse.le/eng/services/list/5/publichealth/publichealthdepts/env/cluster-invest.pdf
5https://www.fsai.ie/publications/management-of-outbreaks-of-foodborneillness#:~:text=This%20document%20describes%20the%20management.by%20ingestion%20of%20contamina
ted%20food.

explore with the EPA and other national stakeholders on ways to improve the quality and accessibility of environment and health data in Ireland to support high quality research that can inform environment and health related policy.

The findings and outputs of such research should be used to optimal effect in terms of informing future policy and /or the strategic direction of research as appropriate. To this end, the HSE and EPA will collaborate to maximise knowledge transfer from EPA-funded research.

The HSE will continue to collaborate on the EPA and the ESRI in the annual Environment, Health and Wellbeing Conference. The HSE will also continue to participate in the EPA Health Advisory Committee which assists and advises the EPA in relation to the public health and environmental health implications of matters pertaining to environmental protection which may arise from time to time.

8. Radon

The EPA and the HSE work with other relevant government departments and agencies to better protect the people in Ireland from the harmful effects of exposure to radon through the successful implementation of the National Radon Control Strategy (NRCS). The current phase of the Strategy sets out measures to reduce the exposure of the Irish population to radon gas. The EPA and the HSE have roles in the delivery of a number of these measures that address public and environmental health which will benefit from collaboration.

EPA role

The EPA role includes:

- Raising public awareness of the risks from radon.
- Managing registration schemes for radon testing and radon remediation services in Treland.
- Providing advice and guidance on radon to householders, employers, schools and other stakeholders.
- Implementation of the actions assigned to the EPA under the National Radon Control Strategy and monitoring effectiveness of Strategy.

HSE role

The HSE role includes:

- Advocacy to the EPA and relevant government departments on the most effective prevention and protection measures, including cost-effectiveness, especially the importance of prioritising effective primary prevention.
- Providing public health risk assessment, public health advice and information on radon.
- Implementation of certain actions that address public and environmental health set out in the NRCS. This is also a strategic objective of the Healthy Ireland Strategic Action Plan 2021 2025 and National Cancer Strategy 2017 2026

Collaboration

The EPA and HSE currently collaborate on the implementation of the NRCS and engage directly on specified actions under the NRCS. EPA and HSE are also members of the NRCS Inter-Agency Coordination Group. EPA and HSE will continue to collaborate and share relevant information and advice in relation to matters such as radon awareness, workplace testing and development of training modules for health professionals.

9. Chemicals

Exposure to certain chemicals in the environment can have detrimental impact on human health. This includes exposure to chemicals which are carcinogenic, teratogenic or toxic.

EPA Role

The EPA is the competent authority for the purposes of the EU Persistent Organic Pollutants (POPs) Regulation and is preparing a national implementation plan on POPs which will involve stakeholder consultation including public authorities listed under SI 146 of 2020 including HSE.

The EPA is also a competent authority (with others including the HSA and the Department of Health) under the Chemicals Act 2008 for the purposes of the REACH Regulations (EC 1907/2007) and the Detergents Regulations (EC 648/2004).

The EPA links with the Food Safety Authority of Ireland (FSAI) regarding routine environmental dioxin exposure surveys. Findings from these surveys examining dioxin levels in cows' milk samples are published annually by the EPA.

HSE Role

The Public Health Medical Officers of Health shall Inform themselves "as respects all influences affecting or threatening to affect injuriously the public health in the county" (Health (Duties of Officers) Order, 1949. Influences including chemical hazards. HSE Public Health advocates on preventing release of chemical hazards and interrupting potentially completed exposure pathways to our public.

HSE Public Health responds to incidents relating to public health risks from chemicals, including major fires, and takes part in exercises to reduce the risk of major emergencies at top-tier Seveso sites. HSE Public Health Investigates concerns about potential clusters of disease, including those that may be perceived to be related to chemical exposures.

In relation to POPs, there are four specific Polycyclic Aromatic Hydrocarbons (PAHs) that are listed internationally as POPs under the 1998 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on. The HSE Public Analyst Laboratory is the appointed National Reference Laboratory for PAHs and carries out analysis of PAHs in a wide range of foodstuffs.

The HSE National Environmental Health Service also carries out food monitoring activity under the terms of a Service Contract with the FSAI.

HSE is also listed as a public body concerned for public health issues under the National POPs Regulation (146 of 2020)

Collaboration

EPA and HSE will cooperate on POPs in line with their respective roles as set out in the National POPs Regulations. Moreover, the two bodies may cooperate more generally on the impact of exposure to hazardous chemicals as agreed by the HSE/EPA Co-ordination Group.

10. Greening Procurement

The public sector has a vital role to play in leading Ireland's transition to a sustainable, resilient and carbon-neutral economy and society. The purchasing power of Ireland's government sector (€21.9 billion annually) has significant potential to reduce emissions and protect our environment while saving money over the full lifecycle of goods and services. Government commitment to green purchasing sends a powerful signal to the market that the Government requires goods, services and works that make the most positive contribution to our environment and can save money over their full lifecycle. It promotes innovation in the marketplace for goods and services with a reduced environmental impact.

EPA role

EPA has produced Green Public Procurement Guidance. The Government's Climate Action Plan 2019 assigned lead responsibility to the EPA for an action that Government Departments would measure and report on Green Public Procurement (GPP) on an annual basis. The EPA has supported the implementation of GPP by offering six GPP training courses for procurers & specifiers in the public sector and has engaged with the Office of Government Procurement to promote GPP. The EPA also publishes reports on GPP by Government Departments annually.

HSE Role

To support the delivery of health and social care services, the HSE, as the largest purchaser in the state, has a procurement spend of approximately €4 billion on goods and services on an annual basis. The HSE is accountable for effective and compliant procurement that delivers value for money with security of supply. HSE's procurement objectives include facilitating environmental, societal and economic objectives through procurement including encouraging and stimulating opportunities for green procurement. There are multiple actions. One example is specifying low carbon construction methods and low carbon cement material as far as practicable for directly procured or supported construction projects from 2023.

Collaboration

EPA will engage with HSE Procurement to seek opportunities to assist HSE with integration of GPP Into its processes including via provision of the EPA's GPP training courses for procurers

& specifiers to HSE procurement staff in line with the work planned in this area under the HSE's Climate Action Plan.

11. Circular Economy, Resource Efficiency & Waste Management

A circular economy contributes to a climate-neutral, resource-efficient economy. This area incorporates the growing area of resource efficiency (estate management, etc.); reducing the carbon footprint of our activities; and considering environmental impacts of our delivery of services.

EPA's role

The EPA's Circular Economy Programme supports the public sector in its leadership of the transition to the circular economy. The Programme strives to realise the significant potential for the public sector to stimulate a critical mass of demand for more sustainable goods and services, while reducing the environmental/carbon impact of providing public services. Working at a cross-government level, activities are intended to support both purchasers and suppliers to engage with green procurement; and undertake monitoring to report uptake and impact. Moreover, the EPA works with organisations on waste prevention.

Collaboration with national organisations to deliver programmes and solutions for the circular economy in Ireland is important for successful delivery of the Circular Economy Programme. EPA works with partner organisations to target priority areas of the economy to realise the benefit from adopting circular practices among large networks. Partners make a tangible contribution to the partnership, through co-funding or in-kind input. Effectiveness of partnership activities are measured against agreed targets and indicators.

EPA also oversees the implementation of the National Hazardous Waste Management Plan (NHWMP).

HSE Role

The circular economy and initiatives in relation to better resource management are included in the HSE's Climate Action Plan. There are a number of areas where work has started on implementing this plan. HSE participate on a working group, convened and Chaired by the EPA, to support the implementation of the NHWMP. HSE are involved in the NHWMP action that is led by the Department of Health and Department of the Environment to deliver a national take back collection scheme of surplus and out-of-date medicines from the household waste stream.

Collaboration

HSE will continue to participate in the EPA's working group on the NHWMP. EPA and HSE will engage to look for opportunities to share learnings and collaborate on improving circularity and waste prevention within their operations. EPA will also seek opportunities to inform HSE about good practices in other bodies that it becomes aware of that may be applicable to HSE operations.

12. Antimicrobial Resistance

The World Health Organisation (WHO) has declared that antimicrobial resistance (AMR) is one of the top 10 global public health threats facing humanity. It notes the rapid global spread of multi- and pan-resistant microorganisms that are not treatable with existing antimicrobial medicines. AMR occurs naturally, but misuse and overuse of antimicrobials in human and animal healthcare are the main drivers in the development of drug-resistant pathogens. Antibiotic resistance – a subset of AMR - leads to longer hospital stays, higher medical costs and increased morbidity and mortality. In the absence of concerted action, it is estimated that by 2050 up to 10 million deaths globally will be associated with complications from antibiotic resistant bacterial infections. HIQA analysis of the economic burden of AMR in Ireland in 2019 found that over 4,700 resistant infections have occurred across 50 public hospitals. National action plans on AMR state that preventing AMR is central to ensuring healthy lives and promoting wellbeing at all ages and AMR was a key risk identified in the 2023 National Risk Assessment. The environment is key to the development, transmission and spread of AMR pathogens to humans, animals and plants.

EPA Role

The EPA is collaborating with the Department of Agriculture, Food and Marine (DAFM) and the Department of Health (DOH) in relation to the implementation of Ireland's 2nd One Health Action Plan on Antimicrobial Resistance 2021-2025 (iNAP2). Its role includes highlighting the issue of AMR from the environmental standpoint, promoting and funding research on the environmental dimension of AMR and undertaking monitoring of waters for antiblotic residues and other markers of AMR. EPA engages with these departments around the annual Tracking AMR Country Self-assessment Survey. It also engages with the AMR One Health Thematic Network chaired by DAFM which aims to promote coordination, synergies and liaison between relevant funding organisations and researchers across the One Health sector. EPA also engages with HSE and others around One Health Reporting on AMR.

HSE Role

HSE Public Health, with its statutory responsibility to control infectious diseases, including the duty to "remove conditions favourable to such infection" under the Infectious Diseases Regulations 1981, takes every opportunity to investigate and prevent the development and spread of AMR. The HSE is also key to delivering on the national implementation Plan on AMR and there are specific tasks assigned to HSE under iNAP2 relating to human health.

Collaboration

EPA and HSE have collaborated on funding a national AMR research project and will continue to cooperate in the scoping and/or implementation of future relevant research in this area. The EPA will continue to engage with HSE on relevant monitoring data examining AMR and antimicrobial residues in environmental matrices, to gain an understanding of the significance of findings and help advance towards One Health surveillance efforts.

13. Other Areas of Potential Common Interest/Purpose

The HSE/EPA Co-ordination Group will keep under review interactions between the two agencies across a number of other areas of common interest and may, as required, set up working groups with defined terms of reference and timeline, to develop procedures or protocols to support cooperation in these areas. These areas include:

Environmental Impact Assessment

EPA is the competent authority for formal screening of Environmental Impact Assessments (EIA) and the HSE is a statutory consultee within the EIA process under the Planning and Development Act 2000 (as amended). This process is coordinated and administered by the HSE National Environmental Health Service. The EPA may consult the HSE in the EIA screening process with regard to potential health impacts. The EPA will collaborate with the HSE when reviewing or updating National Guidance on EIA and Strategic EIA. The HSE will respond to any consultation requests made by the EPA with regard to the protection and enhancement of population health. The HSE may also participate in the reviewing of formulating of National Guidance on EIA and Strategic EIA.

Non-Ionising Radiation

EPA has an advisory function under SI No 190 of 2019 in relation to exposure to non-ionising radiation. EPA and HSE will consider if any collaborative action is required in this area of work.

Environmental Noise

Noise has been identified by WHO as a significant health risk and research on noise perception and background noise effects on human health in differing environments is an area of mutual interest to the EPA and HSE.

END