

## Towards the new EPA Research Strategy

EPA-funded environmental research provides 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. It has also developed high-quality research capacity and supported innovation that is internationally respected.

The EPA Research Programme is a Government of Ireland initiative funded by the Department of Communications, Climate Action and Environment. The current [Research Strategy](#) runs until 2020. The EPA is currently preparing its new Research Strategy for the period from 2021 - 2030.

This Discussion Document is the basis for the first phase of the Consultation Process where feedback / comments are sought on the proposed directions of the new EPA Research Strategy.

This First Consultation Phase is open from 17<sup>th</sup> January 2020 until the 31<sup>st</sup> January 2020

This initial consultation is framed around the following areas:

1. Proposed Strategy Drivers, Aims and Objectives;
2. Proposed Thematic Structure; and
3. Proposed Innovations

## Context

The current EPA [Research Strategy](#) spans seven years (i.e. 2014 to 2020). It was published in 2014 following an extensive consultation process in 2013. While most of the drivers identified in 2013 are still valid and relevant, the external context at national and international level has changed with some significant developments, such as, for example:

- 2015 UN Sustainable Development Goals and related National Implementation Plan publication;
- 2015 Paris Agreement;
- 2017 National Action Plan on Anti-microbial Resistance;
- 2017 National Biodiversity Action Plan and [IUCN- Aichi Biodiversity Targets](#);
- 2015 Peatlands Strategy;
- 2018 EU Circular Economy Package;
- River Basin Management Plan 2018-2021;
- 2019 Publication of Ireland's National Planning Framework: Ireland 2040;
- 2019 Climate Action Plan;
- Phase Two of the National Radon Control Strategy (2019-2024);
- 2018 IPCC Special Report on Land
- 2019 IPCC 1.5°C Report;
- 2019 IPCC Special Report on the Ocean and Cryosphere in a Changing Climate;
- 2019 Review of the Water Framework Directive;
- EEA State of the Environment Report;
- 2019 7<sup>th</sup> EPA Advisory Council Report
- EU New Green Deal; and
- Preparation for Horizon Europe

The next State of the Environment report is currently being drafted (due for publication in 2020). However, the following key messages from the [2016 EPA State of the Environment](#) are still valid:

- Environment and Health & Wellbeing: Recognition of the Benefits of a Good Quality Environment to Health and Wellbeing;
- Climate Change: Acceleration of the National Response to Reducing Greenhouse Gas Emissions, Climate Mitigation and Adaptation;
- Implementation of Legislation: Improve the Tracking of Plans and Policy and the Implementation and Enforcement of Environmental Legislation;
- Restore and Protect Water Quality: Implement Measures that Achieve Ongoing Improvement in the Environmental Status of Water Bodies from Source to the Sea;
- Sustainable Economic Activities: Integrating Environmental Sustainability Ideas and Performance Accounting Across Economic Sectors and Sectoral Plans Should be a Key Policy for Growth;
- Nature and Wild Places: Protect Pristine and Wild Places that Act as Biodiversity Hubs, Contribute to Health and Wellbeing, and Provide Tourism Opportunities; and
- Community Engagement: Inform, Engage and Support Communities in the Protection and Improvement of the Environment.

The European Environment Agency's (EEA) latest 2019 '[State of the Environment](#)' report states that Europe faces environmental challenges of unprecedented scale and urgency. Europe will not achieve

its 2030 goals without urgent action during the next 10 years to address the alarming rate of biodiversity loss, increasing impacts of climate change and overconsumption of natural resources.

Finally, at both organisational level and national research levels, there have been some significant developments, such as:

- 2016 EPA Strategic Plan and associated Goals;
- Merger between the EPA and the RPII, and integration of Radiation Research in the EPA Research Programme;
- [Innovation 2020](#);
- [2018 Refresh of the Prioritisation Exercise](#) highlighting Climate and Sustainability in the refreshed Priority Research Areas;
- [2019 Indecon's Interim Review](#) of the EPA Research Programme 2014-2020;
- [National Policy Statement on Ensuring Research Integrity in Ireland](#), and [National Framework on the Transition to an Open Research Environment Statement](#), which the EPA has endorsed in 2019.

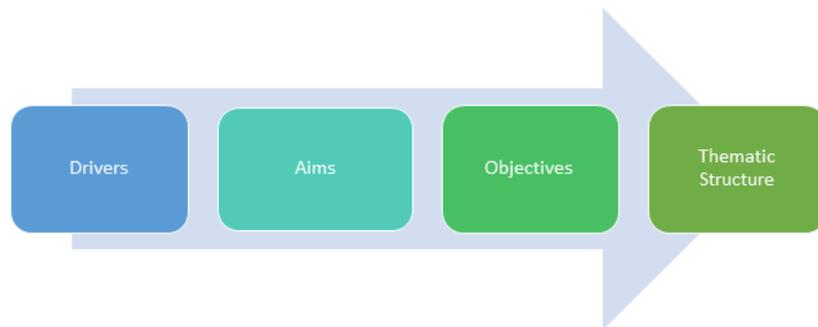
## Timeline

It is proposed that the new Strategy (EPA Research Strategy 2030) will be a high-level strategic roadmap running until 2030. While the external context will change over the proposed 10-year period, the EPA Research annual consultation and prioritisation process, which is in place as part of the research calls preparation, will allow for flexibility and adjustments in response to arising priorities during that period. In addition, it is proposed that the progress made in addressing the objectives of the Strategy will be reviewed on a three-yearly cycle.

## Structure

It is proposed that the EPA Research Strategy 2030 (**Figure 1**) will be a short and high-level roadmap, structured as follows:

- Aims;
- Objectives (and related indicators);
- Key Drivers;
- Implementation:
  - EPA Research Funding
    - Thematic Structure
    - Funding instruments, rules and governance
    - Knowledge transfer
  - Open Data
  - National Environmental Research Coordination
  - National & International Strategic Partnerships
  - Support towards Irish Participation in Horizon Europe
- Indicators and Impact.



**Figure 1: EPA Research Strategy 2030 Schematic**

## Values

The values of the Research Programme will remain fully aligned with the EPA’s corporate values, and will promote Excellence, Transparency, Efficiency; Relevance & Impact; Innovation; and Partnerships (**Figure 2**).



**Figure 2: EPA Research Values**

## Strategy Drivers

The EPA Research Strategy 2030 will respond to the following challenges and provide the evidence-base towards:

- Supporting the implementation and compliance with EU directives.
- Supporting Climate Action and informing Ireland’s transition to a low-carbon climate-resilient environment, society and economy and meeting national and international targets in this process.
- Supporting water protection, conservation and management obligations under the Water Framework Directive, Marine Strategy Framework Directive and Floods Directive.
- Supporting the implementation of the Phase Two of the National Radon Control Strategy (2019-2024).
- Supporting a more holistic approach to addressing environmental challenges
- Developing a better understanding of how individual and collective behaviour can either help or hinder progress towards a low-carbon, resilient, resource-efficient economy and society; and a shared, prosperous and sustainable future for all.
- Furthering the knowledge base on the role of the natural environment, its resources and ecological limits, and our understanding and protection of ecosystems and their role in sustaining the economy and human wellbeing.
- Developing integrated approaches and growth opportunities through management of the systemic challenges that arise from climate change, water quality and other environmental issues.
- Reducing waste generation and treating waste as a resource in line with national and European waste policies to move towards a more resource-efficient and circular economy including bio-economy.
- Understanding environment–health & wellbeing interactions, including risks from radiation, emerging chemicals and novel materials, while highlighting the benefits to human health of a clean and well managed environment.

The EPA Research Strategy 2030 will also be informed by the following developments:

- 2020 EPA State of the Environment Report (*to be published in 2020*);
- New EPA Strategy post 2020 (*to be published in 2020/21*);
- Successor of Innovation 2020 Strategy (*to be published in 2020/21*);
- [2019 Indecon’s Interim Review Recommendations](#);
- 2017 EPA/HSE Environment & Health Research Gaps analysis;
- Knowledge Gaps - [Phase Two of the National Radon Control Strategy \(2019-2024\)](#) (which sets out the research needed to support the strategy);
- Strategic Research Agendas of the relevant initiatives at EU/International level;
- Upcoming Horizon Europe EC Framework Programme 2021-2028.

## Strategy Aims

The overarching goal of the next EPA Research Programme will remain the same as that of the 2014-2020 EPA Research Programme, i.e. using knowledge to protect and improve our natural environment and human health and support the implementation of the Sustainable Development Goals. This translates into the following aims:

- Aim-1.** Identify Pressures;
- Aim-2.** Inform Policy and Behaviour Changes; and
- Aim-3.** Support the Development of Solutions and Implementation Actions.

## Strategy Objectives

To help achieve these aims, the EPA Research Strategy 2030 will have the following objectives:

- Objective-1.** Be responsive to emerging or pressing environmental needs by funding impactful research.
- Objective-2.** Maximise funding opportunities, leverage co-funding, and explore the possibility of funding cross-agencies pilot initiatives addressing grand challenges.
- Objective-3.** Facilitate and promote knowledge transfer.
- Objective-4.** Build national capacity in environmental research.
- Objective-5.** Encourage researchers to collaborate across and between disciplines and pilot innovative ways in engaging with/attracting new researchers on the environmental issues.
- Objective-6.** Continued focus on communication, timeliness and accessibility of research outputs.
- Objective-7.** Promote and support national research funding strategies including those related to research integrity, Open Access and Open Data, Gender considerations.

## Strategy Thematic Structure

In relation to the thematic structure of the Research Programme, it is proposed to move away from the 3-Pillar approach to a less-siloed and more holistic approach, which:

- Builds on the key messages of the 2016 State of the Environment;
- Brings the Circular Economy & Waste, as well as Health & Well-being research areas more into focus;
- Considers the recommendation of 2019 Interim Review of the EPA Research Programme of considering less sub-themes (currently 13 under the current Strategy).

bringing a more integrated approach; representing the links between aquatic and terrestrial ecosystems and the need for a cross-sectoral approach to managing our environment (**Figure 3**).

# New Proposed EPA Research Structure (Pre-Consultation)

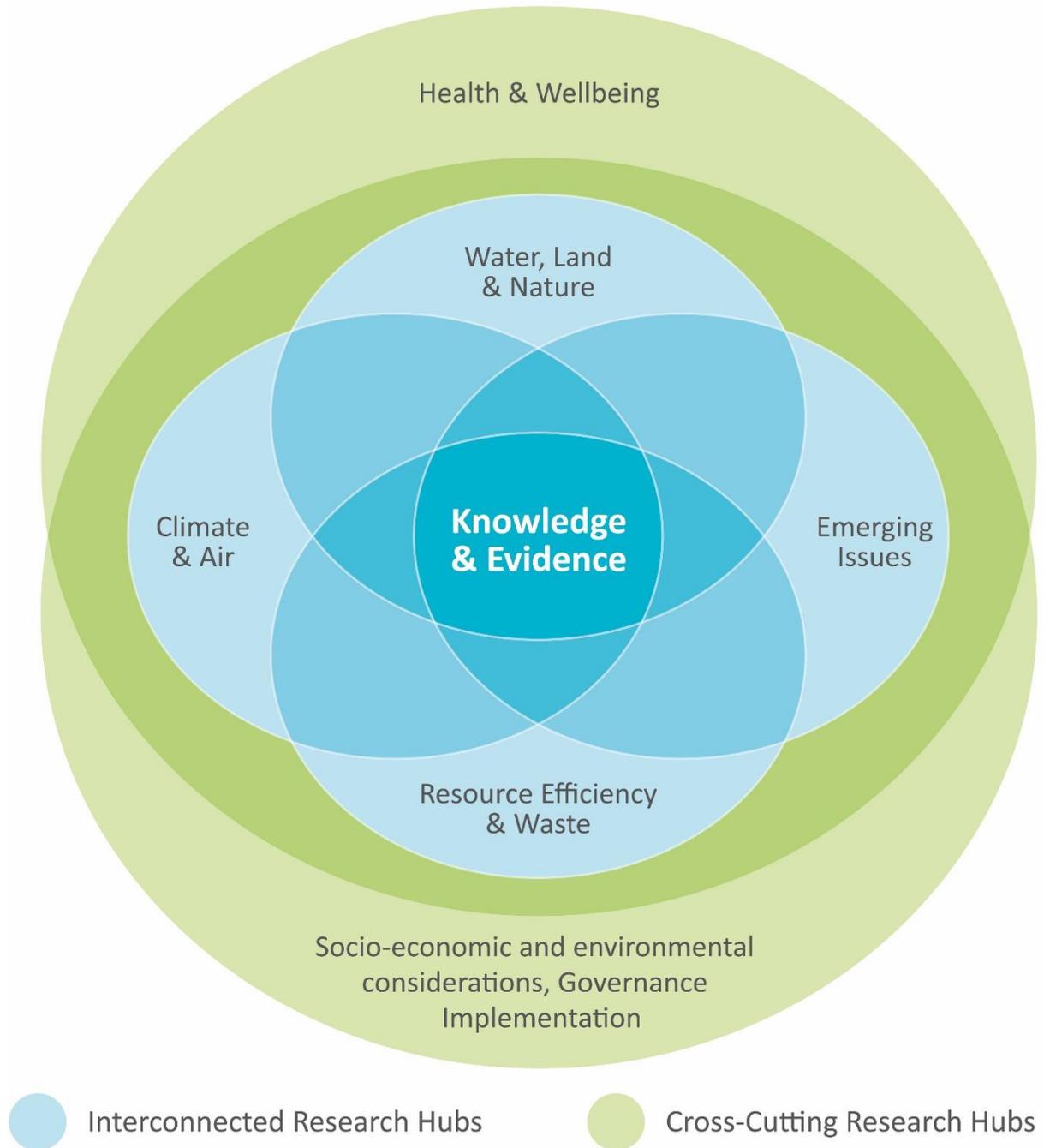


Figure-3: New Proposed EPA Research Structure

It is proposed to implement the EPA Research Strategy 2030 using an integrated Research Hubs approach with:

**Four interconnected Research Hubs:**

EPA Research Hub-1.	Climate & Air
EPA Research Hub-2.	Water, Land & Nature
EPA Research Hub-3.	Resource Efficiency & Waste
EPA Research Hub-4.	Emerging Issues

**and two Cross-Cutting Hubs:**

EPA Research Hub-5.	Health & Wellbeing
EPA Research Hub-6.	Socio-economic and environmental considerations, Governance & Implementation

Research and indicators under each of the new proposed Research Hubs will be presented in the context of their relevance to existing EU and national strategies and policies, as well as in the context of the implementation of the UN SDGs. Thematic workshops will be organised in the first half of 2020 to discuss and develop the context behind the proposed new EPA Research Hubs. A Public Consultation will be open on the draft EPA Research Strategy towards the end of 2020.

## Proposed Innovations in funding and knowledge transfer opportunities of the Research Programme

The EPA is currently reviewing the way it funds research (e.g. type and duration of projects funded) as well as ways of maximising knowledge transfer. Based on the recommendations from the [Indecon 2019 Interim Review Report](#), some of the proposed innovations include:

- Introduction of a Fast-track of knowledge/evidence to inform policy initiative (shorter call to project completion timeline and shorter project duration (up to 6 months));
- Introduction of Larger-Scale integrated projects;
- Focus on Knowledge Transfer activities;
- Integrated approach to Annual Research Call (with specified topics addressing several of the EPA Research Strategy Hubs), based on identified key environmental challenges; and
- More regular Open Calls

## Proposed KPIs for the Research Programme

Progress made against the Strategy Objectives will be measured by implementing a Programme Logic Model (PML) and measured against Key Performance Indicators (KPIs). These will be based on the recommendations from Indecon ([2019 Interim Review Report](#)).

In addition to indicators relating to the Research Programme Inputs, Activities, Outputs and Impacts, the following KPIs are being considered:

- KPI-1. Funding Opportunities (Themed call / Fast track) (indicative budget allocated, number of research project topics included in the call)
- KPI-2. Funding commitment (Themed call / Fast track) (based on awards & response to calls)
- KPI-3. Number of Partnerships & Amount for co-funding received from and given to other Research Funding Organisations (National & International)
- KPI-4. Number of PhDs, Masters, Post-Doctoral Researchers (junior / senior distinction)
- KPI-5. % of awards which are multi-disciplinary
- KPI-6. Number of peer-reviewed Journal Publications supported
- KPI-7. Number of citations of supported researchers related to EPA-funded projects
- KPI-8. Number of EPA Research Reports published
- KPI-9. (a) EPA Research citation in policy documents (National, EU, International).  
(b) Number of policy-focussed workshops held number of published Policy briefs
- KPI-10. Amount of Funding Leveraged (National/International e.g. ERC award, Horizon Europe)
- KPI-11. National research funding strategies (e.g. Open Data, Gender, Research Integrity, etc.): Policy in place and Monitoring