



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

The Department of Environment, Climate and Communications Research and Innovation Survey — Public Consultation

Fields marked with * are mandatory.



**An Roinn Comhshaoil,
Aeráide agus Cumarsáide**
Department of the Environment,
Climate and Communications

Department of the Environment, Climate and Communications Research and Innovation Strategy — Public Consultation

The Department of the Environment, Climate and Communications has set out a vision of a climate neutral, sustainable, and digitally connected Ireland. This will involve leading ambitious climate and environment action across Government and society together with a fundamental shift in sustainable resource use and a transformation of our energy system while at the same time delivering world-class connectivity and cyber security. The Department has identified research and innovation as important enablers of its goals, and is one of a group of five Government Departments which invest significantly in research and innovation. Impact 2030, the national research and innovation strategy, outlines a strong role for the Department in delivering on Strategic Objectives in Climate, Environment and Sustainability (including Energy), and in Digital Transformation (including cyber security). During 2023, the Department is now developing its inaugural Research and Innovation Strategy.

Please complete this survey by 5:30 pm on Friday 11th August.

Note 1: There are no mandatory consultation questions. Fields can be left blank if you do not wish to answer a particular question.

Note 2: Responses to each of the consultation questions is limited to 2000 characters.

Note 3: Copying and pasting text into the boxes directly from Microsoft Word may cause user experience issues. To avoid this, it is recommended to 'paste as plain text'.

Note 4: You can download a PDF copy of your completed survey after you have submitted it.

* Please enter your name

Text of 5 to 200 characters will be accepted

* Please enter your email address

* Please enter your occupation

If you are responding on behalf of an organisation, please enter the name of that organisation.

200 character(s) maximum

Job Title (if applicable)

What gaps do you see in the Department's current research and innovation activities? How should we address those gaps in the Department Research and Innovation Strategy?

2000 character(s) maximum

Within the Research and Innovation Strategy, DECC should seek to maximise the expertise of funded agencies and ensure that they work together to complement each other in building and achieving the objectives of the overall strategy. To bring about societal change, research and policy implementation requires a balance of investment that leads to innovation across academia, industry and communities. This in turn will align with the delivery of the strategic objectives for DECC set out in Impact 2030 relating to Climate, Environment and Sustainability including Energy.

SEAI consider that the most significant gap is a lack of a policy prioritised focus across all R&I activities. To capture DECC's ability to effectively operate and manage R&I with a full overview of all activities, a central structure and strategy is required.

Due to the broad remit within the DECC there may be bias in each section and a more coherent approach with an equal lens is required across all funding bodies including GSI, EPA and SEAI.

Syntheticization of the overall research strategy is required for funding and performing research with different parameters. Funding to follow the central strategy, while acknowledging each agency has a specific DECC remit requiring their deployment of funding mechanisms particular to their sectoral focus. This requires iterative strategy formation in conjunction with funding agencies, defined links with Impact 2030 and cross governmental mechanisms to identify and influence the research agenda to ensure a broader reach.

International collaboration is an important aspect of R&I activities to ensure that there is information exchange with other countries and to leverage existing research thus reducing the likelihood of repetition of research. SEAI is involved in both European and international research activities through Horizon Europe and the International Energy Agency (IEA).

Recommendation: Resumption of DECC Research Funding Agencies Working Group

What actions can the Department take to identify future trends in the areas under our remit?

2000 character(s) maximum

Absorption of salient points from the emerging frontier knowledge base can be achieved by leaning on agency expertise to gain an understanding of emerging proven knowledge from independent bodies (e.g., IEA), national and international funded research and studies conducted in-house. This knowledge can be gathered and synthesized for use by DECC.

Adopt a structured approach to leveraging expertise from the existing domain-specific agencies, to enhance DECC capacity. For example, for energy, leverage the expertise of the SEAI Research & Policy Insights Directorate to inform the identification of future trends.

SEAI and Irish researchers are currently involved in 11 of the IEA Technology Collaboration Programmes (TCPs). The work in the TCPs can be leveraged to identify future trends of relevance to DECC's remit. SEAI's involvement in the EU Strategic Energy Transition Plan (SET Plan) Steering Group is valuable for gaining insights into emerging EU energy research trends.

All major studies (e.g., National Heat Study) and roadmaps carried out/commissioned by SEAI have recommendations under the headings Act now, Decide now and Investigate now. SEAI is currently developing technology roadmaps including District Heating, Offshore Renewable Electricity and the NetZero Electricity Study, which will identify future trends and recommendations.

SEAI has a range of additional supports and mechanisms available to assist DECC in identifying future trends in energy including Technology experts, the National Energy Modelling Framework, the Behavioural Economics Unit, the RD&D Programme and the newly launched SEAI Fellowship Call. The latter aims to embed experts within SEAI to deliver policy relevant research fellowship projects.

Recommendation:

Implement a structure to optimise the use of existing expertise from agencies within DECC to enhance capacity to inform the identification of future trends in climate, environment, sustainability and energy.

Are there specific thematic areas relevant to the Department's remit which you would like to see more research and innovation activity in? How can this be achieved?

2000 character(s) maximum

Ocean energy/Offshore energy

Continued support and investment to realise the ambition of pilot projects required to test early offshore and ocean deployment and integration to Ireland's electricity grid e.g., Innovation Park for floating offshore wind at AMETS.

- with Offshore being a critical path installation to hydrogen it is important to install offshore facilities to trial future possibilities for hydrogen.

Decarbonised Heat

Funding and support for future pilots to de-risk heating for investors, consenting system and users. This includes geothermal, district heating and heat pumps.

Research funding mechanisms

It is vital to provide research funding on a multi-annual basis to give certainty to research funding bodies when forecasting budgets and to researchers. Procedurally, in terms of advance payments and budget approval processes all government funding agencies should be treated equally with a holistic approach. This could be done through further streamlining interaction and engagement between DECC and existing stakeholder consultation processes by the aforementioned DECC Research Funding Agencies Working Group.

Horizon Europe

As part of SEAI's role on the Horizon Europe Programme Committee we provide inputs on Ireland's research priorities for inclusion in the upcoming Horizon Europe Funding Calls. This mechanism allows Ireland to highlight the thematic areas of most importance to Ireland and to make suggestions for discussion with the committee about future funding calls, which results in European wide consortiums researching solutions to challenges emerging from Ireland and beyond, through EU funding.

Have you views on the impact of disruptive technologies such as AI, Quantum and 6G as part of the digital transformation agenda and the implications of these technologies for the Department?

2000 character(s) maximum

Benefits should be harnessed, and risks mitigated to ensure equity. This could be done through an open engagement process by research funders, aligned to Impact 2030, to become better informed and understand how disruptive technologies are being used and identify potential future uses. SEAI has released a tender to explore how AI could be used in funding applications and within the department as an enabler but also to ensure researchers are completing original work. Identify current and future legal implications of disruptive technologies on research and innovation activities.

Recommendations:

Funding agencies to monitor the integrity of funding applications.

Commission study into risk and benefits of disruptive technologies for DECC.

How can the Department better communicate its research and innovation needs?

2000 character(s) maximum

Recommendation:

Identify and streamline avenues for communication of needs internally through DECC Research Funding Agencies Working Group (WG) and with other departments through relevant mechanisms set up in Impact 2030.

How can the Department work more effectively to source evidence from the national research and innovation community to support its work in policy development, policy implementation, and the uptake of new technologies?

2000 character(s) maximum

For societal change a range of future scenarios need to be considered bringing together evidence from diverse actors across academia, industry and communities. Mechanisms and expertise exist within individual research funding agencies to bridge gaps between research and policy. The DECC R&I Strategy should seek to review and streamline approaches in sourcing evidence.

SEAI is involved in several EU projects (under H2020, the LIFE Programme, Horizon Europe and Interreg NWE) that contribute to policy implementation at an EU level. Examples include:

The EEPLIANT3 project which is the largest pan-EU Concerted Action on market surveillance and testing of products to ensure compliance with EU legislation.

ODYSSEE-Mure provides a comprehensive monitoring of energy consumption and efficiency trends as well as an evaluation of energy efficiency policy measures by sector for participating countries.

Energy Performance Buildings Directive Concerted Action project fostering exchange of information and experience among EU Member States with regards to the implementation of the specific EU legislation and policy on the energy performance of buildings.

AFLOWT aims to demonstrate the survivability and cost-competitiveness of a floating offshore wind technology.

In SEAI's role of National Contact Point for Energy under Horizon Europe we work with our colleagues in Enterprise Ireland to support researchers and organisations to access EU funding. Having Irish researchers involved in EU projects increases access to diverse expertise and broader perspectives than can accelerate progress.

Recommendations:

The Research Funding Agencies WG could review existing mechanisms within DECC and across other departments to build a framework within the new R&I strategy for policy development.

Coordinated approach to policy makers and agencies participation on EU funded initiatives, gleaning collaborative solution generation and informing on on EU Directive formation.

How can the Department engage more effectively with all stakeholders in the national research and innovation system? If you are responding on behalf of an organisation, please state how the Department could more effectively engage with your organisation.

2000 character(s) maximum

Internally, engagement could be strengthened through a DECC Research Funding Agencies Working Group and with other departments through mechanisms set up in Impact 2030.

SEAI communicates with DECC and other agencies through:

Quarterly DECC Bulletin

National Energy Research Funders Forum

National Energy Research and Policy Conference

Connecting Research to Policy Seminar Series

Strategic Co-funding partnerships

Strategic Working Groups

Should the Department seek to grow its capacity to carry out in-house research? If yes, how can this be achieved?

2000 character(s) maximum

The Department's in-house research capability could be strengthened through enhanced collaboration and engagement with existing domain-specific agencies, e.g., SEAI (energy), EPA (environment) etc. to leverage existing support, capacity and expertise of the relevant state agencies. This enhanced collaboration and engagement would also minimise the use and need for external consultants. For example, SEAI's involvement in EU funded projects as described in our response to question six can be leveraged to contribute to the department's research requirements to address its policy remit.

Recommendation:

Fellowship Calls – SEAI and the Department could work together to prioritise key research projects/needs for inclusion in future Fellowship Calls that would be relevant to the Department's remit. We could explore how a Fellowship mechanism could be expanded to DECC through the existing mechanisms with the Department's funding agencies.

Are there examples internationally of Government strategies on research and innovation in climate, communications / digital, circular economy, cyber security, energy or environment that we should examine? If so, can you provide details?

2000 character(s) maximum

Taking innovative ideas and concepts developed elsewhere and examining how they might usefully be adapted, further developed, demonstrated and deployed in Ireland can be advantageous for our research and innovation activities. The following are examples of the strategies for large countries (Canada and Japan) and smaller countries (Finland and Portugal).

Canada's National Research Council Strategic Plan for 2019–24 has 5 areas of strategic focus and sets out high-level goals and envisioned outcomes for each area for the next 5 years. Examples of the goals are 'contribute to a cleaner future by reducing Canada's reliance on fossil fuel' and 'support R&D that encourages sustainability and protects against threats to our environment'. <https://nrc.canada.ca/sites/default/files/2020-02/NRC-5yr-strategy-e.pdf>

Japan's Integrated Innovation Strategy 2022 has 3 fundamental pillars. The 1st is strengthening research capabilities and developing human resources. The 2nd pillar is the strategic promotion of advanced and emerging technology, and the 3rd pillar is the creation of an innovation ecosystem.

https://www8.cao.go.jp/cstp/english/strategy_2022.pdf https://www.japan.go.jp/kizuna/_userdata/pdf/2022/summer2022/integrated_innovation_strategy.pdf

The 2020 Finnish National Roadmap for Research, Development and Innovation consists of a set of measures to develop the RDI operating environment. In 2021, an updated National Roadmap for Research, Development and Innovation was published. <https://tem.fi/documents/1410877/2095051/Updated+RDI+Roadmap+2021.pdf/550bffa3-331b-b94c-ebff-8b442fe7b184/Updated+RDI+Roadmap+2021.pdf?t=1643278753288>

The Technological and Business Innovation Strategy 2018-2030 constitutes the main reference for innovation policy in Portugal. It includes eight drivers such as increased investment in research and development, technology valuation and transfer and promotion of innovation. www.ani.pt/media/6212/af_ani_relatorio_bienal_ingles_digital.pdf

Are there any other matters you wish to raise in relation to the development of the research and innovation strategy?

2000 character(s) maximum

Full implementation of recommendations outlined in the Energy Innovation Ireland Strategy Document developed by the Energy Research Strategy Group for the Minister for Communications, Energy and Natural Resources in March 2016 when formulating the DECC Research and Innovation Strategy.

Contact

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