



Rialtas na hÉireann
Government of Ireland



EPA Research - 2018 Call

EPA Research – Water Research Call 2018

Technical Description

The EPA Research Programme is a Government of Ireland initiative funded by the
Department of Communications, Climate Action and Environment

Environmental Protection Agency Research Call 2018: Water

This document provides the **Technical Description** for the Environmental Protection Agency (EPA) **Water Research Call 2018**. Applicants should read the following carefully and consult the other documentation provided (i.e. Guide for Applicants, Guide for Grantees, EPA Terms and Conditions for Support of Grant Awards).

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1. Introduction

The EPA's Research Programme 2014-2020 is designed to identify pressures, inform policy and develop solutions to environmental challenges through the provision of strong evidence-based scientific knowledge:

- **Identifying Pressures:** Providing assessments of current environmental status and future trends to identify pressures on our environment.
- **Informing Policy:** Generating evidence, reviewing practices and building models to inform policy development and implementation.
- **Developing Solutions:** Using novel technologies and methods that address environmental challenges and provide green economy opportunities.

Ireland's Water Resources

Ireland's State of the Environment Report 2016¹ states that overall the assessments of water quality and quantity, show significant challenges ahead to bring all waters to a satisfactory level, and to protect waters already in good condition. Of concern is that preliminary results from the River Basin Management Plan preparation indicate that there has been no overall improvement in water quality over the first river basin planning cycle. Elevated nutrient concentrations continue to be the most widespread water quality problem in Ireland, arising primarily from human activities such as agriculture and waste water discharges to water from human settlements, including towns, villages and rural houses (EPA, 2016).

EPA Water Research

The EPA Research Programme has a strong focus on policy and is driven by national regulations and European directives. A sustained Water Research Programme is an essential component of Ireland's role in protecting its water resources and meeting its requirements under water-related EU directives, the United Nation's Sustainable Development Goals and national policies.

The EPA Research Water Pillar deals with groundwater, surface water, transitional and coastal water, as well as wastewater, drinking, bathing and shellfish waters. The EPA Research Water Pillar is structured into five thematic areas of research, as follows:

- Theme-1.** Safe Water;
- Theme-2.** Ecosystem Services and Sustainability;
- Theme-3.** Innovative Water Technologies;
- Theme-4.** Understanding, Managing and Conserving our Water Resources; and
- Theme-5.** Emerging and Cross-cutting Issues.

Multi- and inter-disciplinary research is required on these themes, with expected social, economic, technological, environmental and policy impacts.

The EPA Research Programme has allocated funding of approximately € 2.8m for new commitments for this 2018 Water research call. The overall aim of the water pillar is to support relevant water policy and to protect our water environment, contributing to achieving excellent water quality in Ireland.

¹ [Ireland's Environment 2016 – An Assessment](#). Environmental Protection Agency, 2016.

Funding Structure

The EPA invites research proposals under the specific topics listed in **Table 1**.

Proposals can be Desk-Studies, Medium-Scale, or Large-Scale Projects and Research Fellowships:

- **Desk-Study** will typically last from 9 to 12 months with an **indicative** cost of up to €100,000;
- **Medium-Scale Project** will typically last from 24 to 36 months with an **indicative** cost of up to €350,000;
- **Large-Scale Project** will typically last from 36 to 48 months with an **indicative** cost of up to €500,000;
- **Research Fellowship** will typically last from 24 to 36 months with an **indicative** cost of up to €250,000.

Co-funding and Partnerships

Co-funding will be provided by the following organisations:



**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

In carrying out its mandate, the **Department of Agriculture, Food and the Marine (DAFM)** undertakes a variety of functions including:

- Policy advice and development on all areas of Departmental responsibility.
- Representation in international especially EU and national negotiations.
- Development and implementation of national and EU schemes in support of Agriculture, Food, Fisheries, Forestry and Rural Environment.
- Monitoring and controlling aspects of Food Safety.
- Control and audit of public expenditure under its control.
- Regulation of the agriculture, fisheries, and food industries through national and EU legislation.
- Monitoring and controlling animal and plant health and animal welfare.
- Monitoring and direction of State Bodies engaged in the following areas - research training and advice - market development and promotion- industry regulation and development- commercial activities.
- Direct provision of support services to Agriculture, Fisheries, Food and Forestry.

DAFM operates three 'public good' competitive research funding programmes for agriculture, food and forestry to support innovation and economic success across the bioeconomy. DAFM also provides support for Irish involvement in the EU Horizon 2020 research funding programme.

The **Office of Public Works (OPW)** is the lead State body for the coordination and implementation of Government policy on the management of flood risk in Ireland. The OPW is also the national authority for the implementation of the EU Directive on the Assessment and Management of Flood Risks [2007/60/EC].





The **Marine Institute (MI)** manages competitive marine research funding programmes. Its competitive research awards have supported more than 260 researchers in the period 2007-2013. It also provides information on marine research funding opportunities from national and EU programmes.



The **Geological Survey Ireland (GSI)** is Ireland's National Earth Science Agency. It is responsible for providing geological advice and information, and for the acquisition of data for this purpose. GSI produces a range of products including maps, reports and databases. The Griffith Geoscience Research Award Programme

provides funding towards water-related research activities and towards marine and coastal, petroleum, geophysics related research. It is mainly driven by the Water Framework Directive and aims at developing models for the behaviour of groundwater, including the impacts of climate change and intensifying infrastructure on future groundwater supplies. It provides funding for research projects to Universities & Research Institutions.



The **National Parks and Wildlife Service (NPWS)** is part of the Heritage Division of the Department of the Culture, Heritage & the Gaeltacht. One of its roles is to secure the conservation of a representative range of ecosystems to maintain and enhance populations of flora and fauna in Ireland. In this it is supported by several National and EU legislation and policies for nature conservation and biodiversity including the [EU Habitats and Birds Directives](#).

Value for Money

All research proposals must **build on findings and recommendations** from past and current research² projects (where relevant) and **demonstrate value for money**. Applicants **MUST clearly demonstrate the value for money of their proposal and that the amount requested as the project budget will allow the proposed research to be addressed appropriately.**

Open Access and Open Data

All projects must comply with the EPA's **Open Data** and **Open Access** rules, which are aligned with Horizon 2020 for the 2014-2020 EPA Research Programme.

Where project outputs include data and/or technical solutions (websites, developed software, database solutions etc.), the format of same **must be agreed with the EPA** to ensure that they are **compatible with EPA IT infrastructure, transferred to EPA systems and can be maintained by the EPA** after the completion of the project.

In addition, **where relevant**, any occurrence data collected as part of the research project must be lodged/archived with the **National Biodiversity Data Centre**³.

² including EPA-funded, other Irish and EU and international research projects and initiatives/activities

³ <http://www.biodiversityireland.ie/>

2. List of Topics

Table 1: List of topics included in the EPA Research Call 2018: Water

Call Topic Ref.	Thematic Areas and Project Titles	Indicative Budget (€) per project	Expected N. of awards	Co-funding
Theme 1: Safe Water				
Water 2018 Call- Project 1	Effective investigation of waterborne infectious diseases - Scoping study	€100,000	Up to 1	n/a
Theme 2: Ecosystem Services and Sustainability				
Water 2018 Call - Project 2	Developing approaches for assessing and optimising the value of ecosystem services (<i>Water Joint Programming Initiative: Thematic Annual Programming</i>)	€250,000	Up to 1	n/a
Theme 3: Innovative Water Technologies				
No topic under this theme in 2018 Water Call			n/a	n/a
Theme 4: Understanding, Managing and Conserving our Water Resources				
Water 2018 Call - Project 3	Nutrient losses from farm roadways	€350,000	Up to 1	DAFM
Water 2018 Call - Project 4	Management options for the improvement of water quality in saline lagoons	€350,000	Up to 1	NPWS
Water 2018 Call - Project 5	Strategies for improving water quality from drained peatlands	€500,000	Up to 1	n/a
Water 2018 Call - Project 6	Managing the conservation and environmental objectives of marl and oligotrophic lakes in Ireland	€350,000	Up to 1	n/a
Water 2018 Call - Project 7	Groundwater monitoring via GRACE satellite gravity measurements over Ireland	€80,000	Up to 1	GSI
Theme 5: Emerging and Cross-cutting Issues				
Water 2018 Call - Project 8	Physico-chemical Cycling of Nutrients and Carbon in Marine Transitional Zones	€500,000	Up to 1	MI
Water 2018 Call - Project 9	Natural water retention measures	€500,000	Up to 1	OPW
OPEN Call				
Water Call 2018 – OPEN Project 1; Water Call 2018 – OPEN Project 2; Water Call 2018 – OPEN Project 3	OPEN Topic		1 or more	

3. Application Process

Making an application online:

Applications must ONLY be made online at <https://epa.smartsimple.ie>

Guide to the EPA online application system:

The guide to the EPA online application system, 'Quick Guide to making an application' is available for download at <http://www.epa.ie/pubs/reports/research/opencalls/currentcalldocuments/>.

What to include in the application form:

To make the best application possible, it is recommended that you read the '2018 EPA Research Guide for Applicants' before drafting and submitting an application, available at: <http://www.epa.ie/pubs/reports/research/opencalls/currentcalldocuments/>.

To make an application under any of the topic areas:

Applicants must choose the correct Call Topic Reference, as indicated in this Document from the list under the OPEN Calls heading on the homepage of SmartSimple the EPA's Grant Application and Project Management system.

It is the responsibility of the **Applicants** to ensure that proposals are submitted before the **call deadline**, and of the relevant **Grant Authoriser** (i.e. Research Offices / Managing Directors for companies) to ensure that the proposals are authorised before the **organisation approval deadline**.

FAILURE TO MEET EITHER OF THE ABOVE DEADLINES MEANS YOUR PROPOSAL WILL NOT BE CONSIDERED FOR FUNDING

4. Call Content

Theme 1: Safe Water

Water quality and human health may be threatened by emerging pollutants, priority substances, endocrine disruptors and emerging risks, such as pathogens (including antibiotic resistant bacteria and viruses), cyanotoxins and nanomaterials. Key knowledge gaps remain concerning their environmental behaviour in surface water, treated waters and groundwater, and their impact on human health through the irrigation of crops, water supply, distribution and storage in rural or urban environments. In addition, water quality and supply can be threatened by climate change, natural hazards and extreme events, such as droughts and floods.

This thematic area will:

- Provide a better understanding of the fate and behaviour of new or poorly understood contaminants and their impacts on water quality with an emphasis on drinking and bathing waters, and on ecosystems and human health.
- Improve our resilience to climate change, extreme events and natural hazards. It will support the implementation and refinement of the relevant policies and develop new tools and best practices in relation to water infrastructure and the prediction & management of natural hazards to ensure that economic investments in this area will result in the on-going availability and delivery of high quality water.
- Develop a better understanding of the socio-economic aspects, governance and behavioural changes associated with this area, including impact of water charges on water consumption, as well as behavioural changes.

One topic is included in this 2018 EPA Water Call under Theme 1: Safe Water:

Water 2018 Call - Project 1. Effective Investigation of Waterborne Infectious Diseases - Scoping Study

Project Title: Effective Investigation of Waterborne Infectious Diseases - Scoping Study

Project Type: Desk-Study

*To make an application under this topic area, you must use the following **Call Topic Reference:**
Water 2018 Call - Project 1*

Background

We need to understand breakthrough contamination of well drinking water, its timing, mechanism, relationship to weather and climate and the limitations of current microbiological testing (monitoring or investigation) of untreated drinking water supplies, predominantly wells. One off sampling can be misleading and falsely reassuring. There is a likely partial causal association between drinking water contamination and Ireland's very high rates of VTEC and *Cryptosporidium*. Both are zoonotic illnesses which are also potentially waterborne. Exposure to animals in a farm setting and exposure to unregulated drinking water from private wells tend to occur together. Studies that differentiate the exposure pathways, which result in a primary case of infection would be very beneficial so that we could determine where to prioritise in terms of prevention. Currently we accept rural/animal exposure as the likely cause at the expense of proving or disproving waterborne illness, with the well as the pathway. This is a barrier to improving drinking water in private unregulated wells in Ireland.

The effect of climate change in Ireland on health is somewhat uncertain. But it is predicted to increase the frequency and intensity of severe weather including precipitation events, which are likely to increase the risk of contamination of drinking water, especially in wells. The impact for health is an increased risk of cases of zoonotic illness, outbreaks and increased mortality, especially in the young or immuno-suppressed. There is great need to understand all potential effects of climate change on health so that appropriate adaptation can take place to reduce the vulnerability of people to the negative effects. This is required under the National Climate Adaptation Framework.

There are currently no adequately sensitive methods for the routine identification and culture of either VTEC or *Cryptosporidium* from environmental samples.

Scope

Innovative research proposals are invited to review what effective (high sensitivity, high specificity) detection methods have been developed that would assist in the identification of pathogen sources and what methods can be used to understand the contamination pathway for waterborne infectious diseases. The proposed research could also include how the predicted climate change patterns effect pathogen survival and hydrological/hydrogeological pathways. The research may also address the subsequent potential health effects from private well drinking water consumption and how they can be mitigated. Based on these findings, the research could then examine how best to characterise the contamination status by VTEC and *Cryptosporidium* of a selected number of private wells in Ireland.

Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.

Outputs

Outputs from this project MUST build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **12-month** Desk-Study, with an **indicative** budget of **€100,000** (which includes a 5% provision for communication costs⁴) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. It is expected that **no more than one project** will be funded under this topic.

⁴ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Theme 2: Ecosystem Services and Sustainability

Water demand and availability pressures, amplified by climate change (including the apparent changing frequency and severity of extreme events, such as floods and droughts) have increased the stress on water bodies and associated ecosystems. The environment does not exist in isolation; it both affects and is affected by many aspects of our lives.

Environmental resources and ecosystem services are direct inputs into the economy. The concept of ecosystem services is based upon the assumption that there is a connection between good ecological status and the provision of several benefits, such as water supply, food supply, biodiversity, landscape value, and others. It is already used by some managers and decision makers as a powerful tool for building and implementing programs of measures. Approaches using ecosystem services could therefore support the Water Framework Directive (WFD) objectives.

This thematic area will:

- Further our understanding of ecosystems context, functions and processes, and safeguard natural resources for future generations by identifying measures to help the adaptation and reaction to current and future pressures on the aquatic environment.
- Develop new tools in the field of ecological engineering and early warning systems.
- Develop a better understanding of the socio-economic aspects, governance and behavioural changes associated with this area, including issues of preservation vs. restoration costs and the demonstration of the economic value and social benefits of aquatic ecosystem services.

One topic is included in this 2018 EPA Water Call under Theme 2: Ecosystem Services and Sustainability:

Water 2018 Call - Project 2.	Developing Approaches for Assessing and Optimising the Value of Ecosystem Services (<i>Water Joint Programming Initiative Thematic Annual Programming</i>)
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Project Title: Developing Approaches for Assessing and Optimising the Value of Ecosystem Services

Project Type: Medium-Scale Project

*To make an application under this topic area, you must use the following **Call Topic Reference:***

Water 2018 Call - Project 2

Background

Many of the world's ecosystems have undergone significant degradation with negative impacts on biological diversity and people's livelihoods. There is a growing realization that we will not be able to conserve the earth's biological diversity and meet the United Nation Sustainable Development Goals (UN SDGs) through the protection of critical areas alone. When applicable, ecosystem restoration in terrestrial, freshwater as well marine environments should be an important component of conservation and sustainable development programmes so that the livelihoods of people depending on these degraded ecosystems can be sustained. For instance, efforts and Research, Development & Innovation (RDI) actions are currently needed at the European level to ensure the protection and/or restoration of water bodies and ecosystems and their biodiversity whilst meeting the socio-economic, political and cultural needs of current and future generations. Further, one of the four priorities of the recent European Union (EU) Action Plan for nature, people and the economy is to improve guidance and knowledge to reach broader socio-economic objectives.

In this context, relevant research for guiding the conservation and restoration of degraded ecosystems and their biodiversity is required to support a relatively wide range of European policy initiatives including the 7th Environment Action Programme (EAP); the EU Biodiversity Strategy; the Water Framework Directive; and the Marine Strategy Framework Directive, the EU Nature Directives and the EU Floods Directive. Such research will also support Europe's endeavours to implement the UN SDGs, especially SDG 6 'Ensure availability and sustainable management of water and sanitation for all', SDG 14 'Life below water', and SDG 15 'Life on land'. These policies have been implemented at national level through the National Biodiversity Action Plan; the River Basin Management Plans; Marine Strategy and the National Catchment Flood Risk Assessment and Management Programmes.

The Water Joint Programming Initiative, Water JPI (www.waterjpi.eu), entitled 'Water Challenges for a Changing World', was launched in 2010 and later formally approved by the European Council in December 2011. The Water JPI membership comprises a total of 22 Member countries, three Observer countries and 5 associated countries, which collectively represent 88% of European public Research, Development and Innovation (RDI) investment in water resources. The Water JPI is dedicated to tackling the ambitious grand challenge of achieving 'sustainable water systems for a sustainable economy in Europe and abroad'. The Thematic Annual Programming action (TAP) is a network of national projects focussed on specific RDI needs. This cluster will allow coordination between the individual projects, lead to a greater impact at the European level and create critical mass, addressing research gaps and avoiding duplication. Activities will include annual working meetings which will allow exchange on approaches, methods, data.

Scope

The proposed research should aim at providing a better understanding and assessment of ecosystem services and could include research on the ecological functioning of aquatic (surface, transitional and coastal water), riparian (located along the banks of rivers, streams, or any other water bodies) and groundwater ecosystems. It is critical that proposals include a detailed State of the Art Review to ensure that they build on existing and past research in this area. The proposed research should cover one (or several) of the research needs, listed below:

- Developing approaches for assessing the ecological functioning of ecosystems;
- Developing and testing methodologies for the valuation of ecosystem services;

- Establishing multiple pressure impact-response relationships in aquatic, riparian and groundwater dependent ecosystems;
- Integrating ecosystem services into management of water resources; and
- Adapting and integrating our water/ecosystem management, planning and governance systems with better environmental data and information.

Where possible, a **trans-disciplinary and multi-institutional approach** should be considered. **Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.**

Research must be undertaken in cooperation and coordination with the Water JPI's Thematic Annual Programming on 'Developing Approaches for Assessing and Optimising the Value of Ecosystem Services' initiative⁵. A more detailed elaboration of the scope and research required can be accessed on the Water JPI website at [Water JPI TAP](#). **The Water JPI will facilitate the setup of the TAP Action. Applicants are not required at this stage to provide details on the foreseen activities. However, projects should foresee 7-10% of the total budget should be allocated to defray costs associated with the Water JPI TAP cluster international networking activities.** The TAP process will start in March/April 2019.

Outputs

Outputs from this project **MUST** build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **36-month** Medium-Scale Project, with an **indicative** budget of **€250,000** (which includes a 5% provision for communication costs⁶) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. It is expected that **no more than one project** will be funded under this topic.

⁵ Applicants may decide to opt-out of this TAP action. A detailed justification **MUST** be provided if this is the case.

⁶ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Theme 3: Innovative Water Technologies

Innovative technologies are required by the water industry to create products and services. This thematic area will contribute to improving the quantity and quality of water bodies, such that our resources will be used in a more efficient way and gain a better understanding of the socio-economic aspects, governance and behavioural changes associated with this area. The objectives of this research area are aligned with the aims of the European [‘Resource Efficiency Roadmap’](#).

This thematic area will:

- Develop novel treatment and distribution options and improve water systems efficiency focusing on aspects such as new materials and processes, new management tools, Information and Communication Technology (ICT), energy efficiency, and small scale water storage.
- Develop problem-solving research leading to the development of market-orientated solutions such as the development of sensor networks and real-time information systems in the water cycle and improved water treatment technologies.
- Improve the quantity and quality of water bodies and developing ways to use these resources more efficiently. Gain a better understanding of the socio-economic aspects, governance and behavioural changes associated within this area, including social acceptance of reused waste and assessing costs against beneficial outcomes to avoid disproportionate costs.

There are no topics included in this 2018 EPA Water Call under Theme 3: Innovative Water Technologies.

Theme 4: Understanding, Managing and Conserving our Water Resources

This thematic area will contribute to better use and protection of water resources, by gaining a better understanding of (i) the potential impacts of human activities, such as abstractions, discharges and land-use on groundwater, rivers, lakes, estuaries and coastal waters; (ii) the views of local communities and the ways of encouraging behavioural change; and (iii) the means of minimising these impacts. Attention will be given to pressures on water arising from agricultural activities. Regulatory measures are essential tools to ensure compliance with environmental standards of water quality and quantity. Understanding the mechanisms leading to improved water management will lead to better policy design, implementation and adaptation.

This thematic area will:

- Further an integrated approach to water management by improving our understanding of the impact of pressures on water quality and quantity, looking at adaptive water management approaches, as well as socio-economic issues.
- Promote the concept of water foot-printing while increasing water resource efficiency and reducing water pollution.
- Strengthen socio-economic approaches to conserve our water resources, covering governance issues, such as public participation and decision-support systems (DSS), as critical tools to integrate scientific knowledge into decision-making and facilitating buy-in/ policy acceptance from the public.
- Deal with socio-economic considerations and practical measures for mitigating the impacts of pressures.

Four topics are included in this 2018 EPA Water Call under Theme 4: Understanding, Managing and Conserving our Water Resources:

Water 2018 Call - Project 3.	Nutrient Losses from Farm Roadways
Water 2018 Call - Project 4.	Management Options for the Improvement of Water Quality in Saline Lagoons
Water 2018 Call - Project 5.	Strategies for improving Water Quality from drained Peatlands
Water 2018 Call - Project 6.	Managing the Conservation and Environmental Objectives of Marl and Oligotrophic Lakes in Ireland

Project Title: Nutrient Losses from Farm Roadways

Project Type: Medium-Scale Project

*To make an application under this topic area, you must use the following **Call Topic Reference**:*

Water 2018 Call – Project 3

This topic is co-funded with the Department of Agriculture, Food and the Marine.

Background

The Nitrates Directive, implemented by means of the Nitrates Action Programme (NAP), is the basic agricultural measure in the Water Framework Directive's River Basin Management Plan (RBMP) for the protection of waters from agricultural sources in Ireland and therefore is the key agricultural measure for preventing and reducing water pollution from nutrients (nitrogen and phosphorus) arising from agricultural sources. The Nitrates regulations (SI 605 2017) give effect to Ireland's NAP and have introduced a requirement that no runoff be allowed from farm roadways to waters from the 1st January 2021. This is one a series of measures that focus on intercepting and breaking nutrient transport pathways and preventing sediment and nutrient losses to watercourses and dry drains.

Scope

Innovative research proposals are invited to characterise the extent and types of farm roadways at a catchment scale, their hydrological connectivity to receptors, and to devise a set of rules by which the likelihood of nutrient losses (primarily phosphorus (P) but also nitrogen (N)) may be scored. The research would quantify the potential contribution of farm roadways to nutrient loss to watercourses via overland flow. Nutrient loads and the timing of overland flow should be considered in this characterisation. It is envisaged that the research would also consider best management practices, and engineering solutions by which nutrient loss via farm roadways could be mitigated or prevented.

Where possible, a **trans-disciplinary and multi-institutional approach** should be considered. **Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.**

Outputs

Outputs from this project **MUST** build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **36-month** Medium-Scale Project, with an **indicative** budget of **€350,000** (which includes a 5% provision for communication costs⁷) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. **This topic is co-funded with the Department of Agriculture, Food and the Marine.** It is expected that **no more than one project** will be funded under this topic.

⁷ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Project Title: Management Options for the Improvement of Water Quality in Saline Lagoons

Project Type: Medium-Scale Project

*To make an application under this topic area, you must use the following **Call Topic Reference:***

Water Call 2018 – Project 4

This topic is co-funded with National Parks and Wildlife Service

Background

Saline lagoons are ecologically very valuable but vulnerable systems, which are home to rare species of flora and fauna and support a wide range of bird life. These are priority habitats under the Habitats Directive. Lagoons are also important wetlands under the Birds Directive and requires protection to ensure their functioning as important ecosystems.

While they have been the focus of monitoring for over ten years, many continue to have poor ecological condition and in some case declining quality. Many lagoons are failing under both the Habitats Directive and the Water Framework Directive (WFD). Saline lagoons are complex systems with unique problems and generic methods for restoration and improvement are unlikely to be effective. Lagoons are one of the worst performing types of transitional and coastal water bodies and Annex I (Habitats Directive) habitats. Stakeholders lack the information to develop improvement measures and require a suite of possible measures depending on the type of lagoon. Lagoons continue to be under threat and the reasons for this are not well understood. Existing water quality improvement measures may not be adequate to restore these waters and a greater understanding of potential measures is needed. Targeted measures are needed to be developed in the short term to ensure that these ecosystems are protected and no further deterioration of valuable but vulnerable systems occurs. This project will help to achieve the obligations under the WFD and the Habitats and Bird Directives.

Scope

Innovative research proposals are invited to assess if existing water quality improvement measures are sufficient to restore and protect saline lagoons; identify targeted measures to ensure that these ecosystems are protected in the short-term; as well as consider what specific practical management protocols could be developed to ensure there is no further deterioration of these valuable ecosystems. It is envisaged that the research would consider the development of a Practical Manual for improving and maintaining lagoon ecological condition and demonstration of novel lagoon management practices.

Where possible, a **trans-disciplinary and multi-institutional approach** should be considered.

Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.

Outputs

Outputs from this project **MUST** build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **36-month** Medium-Scale Project, with an **indicative** budget of **€350,000** (which includes a 5% provision for communication costs⁸) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. **This topic is co-funded with the National Parks and Wildlife Service.** It is expected that **no more than one project** will be funded under this topic.

⁸ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Project Title: Strategies for improving Water Quality from drained Peatlands

Project Type: Large-Scale Project

*To make an application under this topic area, you must use the following **Call Topic Reference:**
Water 2018 Call – Project 5*

Background

Peatlands have been identified as causing a significant risk to ecological status objectives in over 10% of 'at risk' water bodies, including several high ecological status objective water bodies. The environmental impacts generally relate to suspended solids, ammonia and hydromorphological alterations. There is evidence that high levels of ammonia are being released from peat extraction activities during the draining process and may be causing ecological impacts in receiving waterbodies. [Bord Na Móna](#) currently owns 7.5% of the peatlands of Ireland and they have a Sustainability 2030 Strategy to address the long-term rehabilitation of its cutaway bogs. Many bogs will cease peat production under these plans and become available for rehabilitation.

Research is needed to identify the best practices for improving water quality impacts from disturbed peatlands, including, **but not limited to**, cutaway bogs under Bord Na Móna or other ownership. This research would complement '[The Living Bog](#)' EU Life Project (2016-2020) which focused on restoration and conservation of 12 raised bog Special Areas of Conservation. The evaluation of measures and identification of potential lag times for water quality and ecological improvements are of relevance to the Water Framework Directive (WFD) and the Habitats and Birds Directive. This is reinforced in the National Peatlands Strategy as states for all peatland related activities, that they should not adversely impact on the environmental objectives of the WFD and the environmental supporting conditions for designated habitats.

Scope

Innovative research proposals are invited to evaluate water quality from peatlands (virgin, commercially active, domestic turf and cutaway), consider technologies/methodologies for the treatment/reduction of ammonia and other naturally occurring chemicals/elements from these peatlands and the reduction of ammonia and assessment of 'time lag' for the improvement of ecological status following implementation of water quality measures in disturbed peatlands. The research would consider the multiple benefits related to restoration including biodiversity and flood retention; and should build on previous studies on the effectiveness of peatland rehabilitation measures on water quality. It is envisaged that the research would consider the development of Best Practice Guidelines relating to mitigation strategies for improving water quality of a range of peatland types.

It is envisaged that this research will require a **trans-disciplinary and multi-institutional approach**.

The successful proposal will be required to interact with the projects which will be funded under the topic of Natural Water Retention Measures (**Water 2018 Call-Project 9**) and the viability of peatlands for flood attenuation measures. **This interaction will be facilitated by the EPA.**

Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.

Outputs

Outputs from this project **MUST** build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **48-month** Large-Scale Project, with an **indicative** budget of **€500,000** (which includes a 5% provision for communication costs⁹) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. It is expected that **no more than one project** will be funded under this topic.

⁹ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Project Title: Managing the Conservation and Environmental Objectives of Marl and Oligotrophic Lakes in Ireland

Project Type: Medium-Scale Project

To make an application under this topic area, you must use the following Call Topic Reference:

Water 2018 Call – Project 6

Background

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats Directive under Annex I and Annex II, respectively. Special Areas of Conservation (SAC) are designated to afford protection to both. Special Areas of Conservation together with Special Protection Areas (SPA) designated by the Birds Directive are collectively known as the Natura 2000 network. Where there are water-dependent qualifying interests in a Natura 2000 site, it is included on the register of Protected Areas under the Water Framework Directive (WFD).

Marl lakes are included within Habitat 3140 (hard oligotrophic-mesotrophic water with benthic vegetation of *Chara* spp.) as listed in Annex 1 of the Habitats Directive. Oligotrophic lakes are associated with four Annex 1 habitats (3110, 3130, 3150 and 3160). There is significant overlap among the habitats, particularly Habitat 3110¹⁰ and Habitat 3130¹¹. Habitat 3110 is frequently associated with acid bedrock overlain by peatland dominated by species with an isoetid¹² growth form, such as Quillwort, or Water Lobelia. Habitat 3130 is also associated with peatlands, but also occurs on more mixed geology. The Annex II plant species Slender Naiad is a character species of the more species-rich 3130 Habitats. Ireland is a stronghold for both habitats with the main pressures on Habitat 3110 are eutrophication, and drainage and other damage to peatland. Habitat 3110 has a very widespread distribution and occurs in many lakes.

Measures to improve the conservation status of peatlands, particularly of blanket bog are critically important to the protection and restoration of oligotrophic lake habitats. Implementation of such measures take place under the National Peatland Strategy¹³. The Strategy covers the period 2015 to 2025 and will be subject to a mid-cycle review in 2020. It has already identified linkages between conservation work on bogs as a support to achievement of the objectives of the WFD. During planning for the 3rd cycle of the WFD, the EPA, NPWS and the local authority WFD shared service will seek to leverage activities under the Peatland Strategy to support achievement of the WFD objectives in a concrete and explicit fashion and *vice versa*.

The Local Authorities Water and Communities Office, in conjunction with the EPA, led a series of workshops with public body stakeholder to agree areas to focus efforts under the WFD during the period 2018 to 2021. This process has culminated in the initial list of 190 areas encompassing 726 water bodies where work will be focussed until 2021. A new local authority shared service (managed by Tipperary County Council and Kilkenny County Council) will be responsible for scheduling and undertaking work in the 190 areas subject to oversight by regional local authority led committees. Some of the priority areas include marl and oligotrophic lakes.

¹⁰ Habitat 3110: Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)

¹¹ Habitat 3130: Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*

¹² Isoetids are aquatic plants or wetland plants named for their superficial similarity to the quillworts, Isoetes. They occur in wetlands and on shorelines with low nutrient availability.

¹³ <https://www.npws.ie/peatlands-and-turf-cutting/peatlands-council/national-peatlands-strategy>

Scope

Innovative research proposals are invited to identify and assign lakes to marl-lake sub-types and further investigate their ecological, physical and chemical characteristics, and natural ecological drivers address the following; refine current metrics tailored for subtypes and physical conditions; and design simplified field and assessment metrics to allow for wider and more frequent monitoring of the habitat and to support WFD assessments under Protected Area requirements. It is expected that the research would answer the following questions:

- What are the supporting conditions, pressures and the measures needed for the protection of marl lakes using the source pathway receptor model, with a focus on the habitat in oligotrophic, high-conservation 3140 SACs, linking to Areas for Action, where possible?
- What are the supporting conditions, pressures and the measures needed for the protection of oligotrophic lakes are associated with four Annex 1 habitats (3110, 3130, 3150 and 3160)?
- How would the conservation status of these lakes be best assessed?

The focus should be on delivering good science and an improved environment, by building on the substantial volume of existing information. The proposed research should also seek to develop national capacity for monitoring and assessment of these lake types and their habitats.

Where possible, a **trans-disciplinary and multi-institutional approach** should be considered. **Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.**

Outputs

Outputs from this project MUST build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **36-month** Medium-Scale Project, with an **indicative** budget of **€350,000** (which includes a 5% provision for communication costs¹⁴) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. It is expected that **no more than one project** will be funded under this topic.

¹⁴ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).



Project Title: Groundwater Monitoring via GRACE Satellite Gravity Measurements over Ireland

Project Type: Desk-Study

*To make an application under this topic area, you must use the following **Call Topic Reference:***

Water 2018 Call – Project 7

This topic is co-funded with the Geological Survey of Ireland.

Background

The trends in groundwater storage is a poorly understood topic. It may be possible to use satellite data to monitor the change in volume of underground aquifers, and highlight aquifers under the greatest stress from human actions, as well as other stressors. This can lead to more informed and responsible management of groundwater resources. GRACE, short for Gravity Recovery and Climate Experiment, is a NASA mission consisting of twin satellites that were launched in 2002¹⁵. The satellites are in the same orbit around Earth, one about 220 kilometres (137 miles) in front of the other at an altitude of 460 kilometres (286 miles) above the Earth's surface. Together, they measure Earth's gravity field with a precision greater than any previous instrument. GRACE maps the entire gravity field of Earth every 30 days. Changes in gravity over time can reveal important details about polar ice sheets, sea level, ocean currents, Earth's water cycle and the interior structure of the Earth.

Better understanding of groundwater storage through this work will assist in identifying groundwater bodies that have over-abstraction problems, which is a requirement of the Water Framework Directive. It may also provide valuable information to inform the expected regulation of abstractions.

Scope

Innovative research proposals are invited to assess if the GRACE satellite observations (2003-2017) could be used to determine the seasonal, semi-annual, annual and long-term variations of groundwater storage and water level over Ireland.

Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.

Outputs

Outputs from this project **MUST** build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

¹⁵ https://www.nasa.gov/audience/foreducators/k-4/features/F_Measuring_Gravity_With_Grace.html

Project Structure and Funding

The EPA considers that proposals for a **12-month** Desk-Study, with an **indicative** budget of **€80,000** (which includes a 5% provision for communication costs¹⁶) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. **This topic is co-funded with the Geological Survey of Ireland.** Please refer to the **2018 Guide for Applicants** for further details. It is expected that **no more than one project** will be funded under this topic.

¹⁶ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Theme 5: Emerging and Cross-cutting Issues

This thematic area will cover the emerging policy and implementation research needs in relation to the implementation of the [Water Framework Directive \(WFD\)](#), as well as marine research considerations in support to the formulation and implementation of policies over the period 2014-2020.

Two topics are included in this 2018 EPA Water Call under Theme 5: Emerging and Cross-cutting Issues:

Water 2018 Call - Project 8.	Physico-chemical Cycling of Nutrients and Carbon in Marine Transitional Zones
Water 2018 Call - Project 9.	Natural Water Retention Measures

Project Title: Physico-chemical Cycling of Nutrients and Carbon in Marine Transitional Zones

Project Type: Large-Scale Project

To make an application under this topic area, you must use the following Call Topic Reference:

Water 2018 Call - Project 8

This topic is co-funded with the Marine Institute.

Background

Transitional zones between land and sea are areas of high chemical and biological activity. In these systems, terrestrial sources of nutrients and carbon can be filtered and transformed by biological and physico-chemical processes. Shifts in the loads of these nutrients can impact on the growth and functioning of primary producers, higher trophic levels and the cycling of oxygen and carbon. Multiple stressors such as nutrient enrichment, ocean acidification and climate change can impact in complex ways on the functioning and overall health of these systems and on the cycling of these key elements. These interactions can be additive, antagonistic or even synergistic. Disturbance to the cycling of these key elements in marine transitional zones can have implications for water quality and the export of nutrients to coastal waters, and in the case of carbon, to the atmosphere.

The purpose of this project is to better understand and characterise these cycles and to better understand how multiple stressors such as nutrient enrichment and ocean acidification may interact and impact on the normal functioning of these cycles and on the health of marine and estuarine ecosystems. This understanding can then be used to determine the likely sensitivity and resilience of Irish marine systems to future environmental change. This knowledge can in turn be used to inform environmental decision making and marine spatial planning. The project would assist in the implementation of the National Spatial Strategy and Coastal Zone Management. It could inform Flood Risk Management, National Climate Policy and provide information on adaptation to change (climate, rainfall, river flow, ocean change, sea level rise). It would also feed into the Water Framework Directive (WFD) characterisation and the implementation of the Programme of Measures.

Scope

Innovative research proposals are invited to increase our understanding of the mechanisms of cycling of nutrients and carbon in marine transitional zones and their response to multiple stressors. The significance of nitrogen and phosphorus cycling in sustaining phytoplankton blooms and possible species shifts in key Irish transitional systems should also be examined. The research should aim at determining the influence of hydrology (freshwater and tidal) on transitional systems using high resolution monitoring and modelling. The research could assess how these land-sea interactions affect the overall marine environment and cycling of nutrients in coastal waters, as well as the role of Irish transitional zones as sources and sinks of carbon to the atmosphere. The research could also encompass how the impacts of shifts in stressors on the functioning and ecological health of transitional systems could be assessed.

It is envisaged that this research will require a **trans-disciplinary and multi-institutional approach**. **Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.**

Outputs

Outputs from this project MUST build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **48-month** Large-Scale Project, with an **indicative** budget of **€500,000** (which includes a 5% provision for communication costs¹⁷) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. **This topic is co-funded with the Marine Institute.** It is expected that **no more than one project** will be funded under this topic.

¹⁷ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Project Title: Natural Water Retention Measures

Project Type: Large-Scale Project

*To make an application under this topic area, you must use the following **Call Topic Reference**:*

Water Call 2018 – Project 9

This topic is co-funded with the Office of Public Works.

Background

Natural Water Retention Measures (NWRM) are regarded by the European Commission as an area of work in need of consideration across the EU (e.g. 2014 Common Implementation Strategy (CIS) Mandate for the Programme of Measures working group (EU policy document on Natural Water Retention Measures and Water Blueprint: Maximisation of the use of Natural Water Retention Measures (Green Infrastructure)). However, research focusing on NWRMs is quite limited in Ireland while further afield, the effectiveness of such measures and which catchments might be suitable for their application still need to be fully understood. Nevertheless, NWRMs are now seen as an important component of integrated catchment management, as noted by the national set of Flood Risk Management Plans and the national River Basin Management Plan, providing multiple benefits (i.e. reducing flood risk, improving water quality, regulating water storage and delivery, sequestering carbon, supporting biodiversity and delivering amenities¹⁸).

Other challenges involve community engagement such as buy-in from landowners and how NWRMs are communicated to the public. Tackling these challenges is important for successful implementation. The expected output and impacts will be of relevance to the Water Framework Directive; Floods Directive; Habitats Directive; Biodiversity Strategy to 2020; Green Infrastructure Strategy; Strategy on adaption to climate change. Hydromorphology has been identified as an area that requires a major focus in the European Commission's 2016-2018 CIS work programme and therefore the national River Basin Management plan. NWRMs are one component of the hydromorphological measures toolkit and understanding the feasibility of these measures for use in Ireland is vital. By implementing NWRMs, the outcome will support integrated catchment management, river restoration, flood risk management and biodiversity while also providing an opportunity for better linkages between EU directives.

Scope

Innovative research proposals are invited to identify and review past and current NWRMs projects undertaken in Ireland and elsewhere, how effective they were and what lessons could be learned. Research projects should identify the policies and practices in forestry, agriculture, and peatland management that present opportunities and challenges for the implementation of NWRMs in Ireland. The research should identify what Irish catchment types are most suitable to the implementation of NWRMs, assess how these measures could be adapted to achieve multiple benefits in an Irish setting; and analyse the effectiveness of these measures in achieving the range of potential benefits, including mitigating the effects of climate change and for flood risk reduction in extreme events as well as in smaller, more frequent events. The research would also assess the potential delivery routes for NWRMs in Ireland and the practical issues related to their implementation and maintenance. **The use of field trials and demonstration sites in suitably representative catchments (for which there are pre-existing high-quality rainfall and water flow and quality baseline data) is a necessary part of any proposals.**

¹⁸ www.nwrm.eu

The successful proposal will be required to interact with the projects which will be funded under the topic of Evaluating Mitigation Strategies for improving Water Quality from drained Peatlands (**Water 2018 Call-Project 5**). **This interaction will be facilitated by the EPA.**

It is envisaged that this research will require a **trans-disciplinary and multi-institutional approach**. **Proposals should demonstrate added-value for money as well as how the outputs from the proposed research will inform policy.**

Outputs

Outputs from this project **MUST** build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

The EPA considers that proposals for a **48-month** Large-Scale Project, with an **indicative** budget of **€500,000** (which includes a 5% provision for communication costs¹⁹) would allow this specific topic to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of proposals requesting other amounts. Please refer to the *2018 Guide for Applicants* for further details. **This topic is co-funded with the Office of Public Works.** It is expected that **no more than one project** will be funded under this topic.

¹⁹ For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

Open Topic

Project Type: OPEN

*To make an application under this topic area, you must use one of the following **Call Topic Reference**:*

Water Call 2018 – OPEN Project 1

Water Call 2018 – OPEN Project 2

Water Call 2018 – OPEN Project 3

Background

Under each of the 2018 EPA Research Calls, a section of the calls is targeted to an OPEN Call.

The same proposal should NOT be submitted more than once. Applicants must ensure that they select the most relevant Open Topic (i.e. under the 2018 Water, Sustainability or Climate Calls).

Applicants can submit up to three proposals under this Water Call 2018 Open Topic:

- To make one application under this topic area: you must use Call topic Reference **Water Call 2018 – OPEN Project 1**;
- To make a second application under this topic area: you must use Call topic Reference **Water Call 2018 – OPEN Project 2**;
- To make a third application under this topic area: you must use Call topic Reference **Water Call 2018 – OPEN Project 3**.

Scope

Proposals for innovative research are invited to provide the evidence to support environmental policy in Ireland. It is critical that applicants clearly demonstrate the relevance of their proposed research to:

- EPA Research Strategy 2014-2020; and
- National environmental policy context, e.g. Water Framework Directive; River Basin Management Plans, State of the Environment Report; and
- Implementation of the UN Sustainable Development Goals.

Applicants MUST clearly demonstrate how their proposed research will provide the evidence to support environmental policy in Ireland, in terms of identifying pressures, informing policy and developing solutions. It is strongly recommended that the applicants familiarise themselves with and utilise the tools provided in the EPA Bridging the Gap Resource Kit:

- [EPA Research Report 131](#): BRIDGE: Tools for science-policy communication;
- [EPA Research Report 132](#): Good Practice Guide for science-policy communication; and
- [EPA Research Report 133](#): A Knowledge Transfer Guide for Researchers.

Where appropriate, applicants are being encouraged to consider how best to integrate the use of Earth Observation (e.g. COPERNICUS) to address their selected research question.

All research proposals must **build on findings and recommendations** from past and ongoing research^[1] projects (where relevant), and should consider linkages and synergies with projects to be funded under the other topics included in this current call - **clearly demonstrating that there will be no duplication.**

^[1] including EPA-funded, other Irish and EU and international research projects and initiatives/activities

Proposals requiring access to Irish Water-owned data or assets, should include a contingency plan, should such access not be granted.

Outputs

Outputs from this project MUST build on existing research and other information. Proposals must comply with the EPA's policy on [Open Access and Open Data](#). Please refer to [Section 5](#) for more information regarding EPA-funded expected outputs.

Project Structure and Funding

These proposals can be for Desk-Studies, Medium-Scale or Large-Scale Projects (See [Section 2](#) for indicative budget (which includes a 5% provision for communication costs^[2]) and duration). **Applicants must clearly demonstrate the value for money of their proposal and that the amount requested for the project budget as well as the type of project selected (i.e. Desk-Studies, Medium-Scale, or Large-Scale Projects) will allow the proposed research to be addressed appropriately.** Please refer to the *2018 Guide for Applicants* for further details. It is expected that **one or more projects** will be funded in 2018 under this Open topic and a Reserve List will be established for consideration in 2019.

^[2] For example, a €100,000 grant award is made up of €95,000 for project costs, and €5,000 for communication costs (€3,000 of which relates to communication activities and events which take place over the lifetime of the project and €2,000 which relates to post completion dissemination costs).

5. Expected Outputs

For all projects, expected outputs include, but are not limited to:

- **Final Report**, which should provide a clear and detailed account of all the steps and methodologies used during the project and ensure that the objectives, set out above, are met – including recommendations.
- **Synthesis Report** (20-30pp), which provide a clear non-technical summary of the research and of the recommendations.
- **Infographics** including but not limited to one on inception of the project describing the project aims & objectives; and one on completion of the project summarizing the main findings.
- **Policy Briefs and Dissemination 2-pager**, which will be used to disseminate the findings of the research to the key stakeholders.
- **Workshop/Dissemination event(s)** to all stakeholders in the relevant arena (e.g. Policy, monitoring, regulatory, NGOs, media, public, etc.).

The list provided above is indicative and relevant alternatives will be considered. Please consult the *2018 Guide for Applicants*, *2018 Guide for Grantees* and the *EPA Terms and Conditions of award* for the **full list** of interim and final reporting requirements.

A **dedicated website/webpage/Twitter account** should be created and maintained, presenting the project and work carried to-date. It is also expected that several **dissemination outputs**, such as posters, leaflets, newsletters, policy briefs, peer-reviewed publications and presentations, will arise from the projects.

It is essential that applicants clearly demonstrate, in their proposal, the **policy-relevance** of the outputs of their proposed research; the **applicability** of their findings; and how these outputs address a knowledge-gap and can be **efficiently transferred/applied to the implementation** of policies and the protection of our environment. **Applicants MUST clearly demonstrate how their proposed research will provide the evidence to support environmental policy in Ireland, in terms of identifying pressures, informing policy and developing solutions.**

It is strongly recommended that the applicants familiarise themselves with and utilise the tools provided in the EPA Bridging the Gap Resource Kit:

- [EPA Research Report 131](#): BRIDGE: Tools for science-policy communication;
- [EPA Research Report 132](#): Good Practice Guide for science-policy communication; and
- [EPA Research Report 133](#): A Knowledge Transfer Guide for Researchers.

6. Indicative Timeframe

23 rd April 2018:	Call Opening
18 th June 2018 (5.00 pm):	Deadline for queries relating to the technical contents of this call
27 th June 2018 (5.00 pm):	Deadline for submission of applications by applicants
6 th July 2018 (5.00 pm):	Organisation Approval Deadline for authorisation by Research Offices
July/September 2018:	Evaluation Process
September/October 2018:	Negotiation ²⁰
November 2018:	Grant Award of Successful Projects
By 31 st March 2019:	Start of Successful Projects

²⁰ The EPA may consider calling the shortlisted applicants for interview at this stage.

7. Further Information

Information on current research projects being supported by the programme is available in the Research Section of the EPA web site (www.epa.ie/researchandeducation/research).

Alternatively, for further information on this call, please contact research@epa.ie. Follow us on Twitter [@EPAResearchNews](https://twitter.com/EPAResearchNews) to keep up-to-date with all our activities

The following additional documents are available from the EPA website:
<http://www.epa.ie/pubs/reports/research/opencalls/currentcalldocuments/>

- 2018 EPA Research Guide for Applicants;
- 2018 EPA Research Guide for Grantees;
- 2018 EPA Research Terms & Conditions for Support of Grant Awards;
- Quick Guide to making an application;
- User Guide for Applicants;
- Guidelines to Open Access Research Publications and Data in Horizon 2020;
- Open access to publications and data in Horizon 2020: Frequently Asked Questions (FAQ) – Fact Sheet;
- EPA Research Programme Policy on Maternity, Paternity and Adoptive Leave;
- Communications Plan Template;
- Work Packages Template

All queries MUST be submitted to research@epa.ie

**All queries, other than on the submission process, should be submitted by the
18th June 2018, 5.00 pm at the latest.**