EPA Research - 2017 Call

EPA Research – Climate Research Call 2017
Additional Topic on: Air Quality Open Data Research Fellowship

Technical Description
June 2017

Environmental Protection Agency Research Call 2017: Climate
Additional Topic on: Air Quality Open Data Research Fellowship

This document provides the **Technical Description** for the Environmental Protection Agency (EPA) **Climate** Research Call 2017 - Additional Topic on: Air Quality Open Data Research Fellowship. Applicants should read the following carefully and also consult the other documentation provided (i.e. Guide for Applicants, Guide for Grantees, EPA Terms and Conditions for support of grant awards).

Contents

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 Climate & Air Quality

Ireland's State of the Environment Report 2016[1] states that responding effectively to climate change is both urgent and long term. It is urgent in that our global actions and responses in the next 5–15 years may effectively lock in large-scale and irreversible planetary changes over this and subsequent centuries. While the 2015 Paris Agreement sets the international agenda, Ireland's actions for addressing climate change need to occur at national, sub-national levels and within and between communities. The National Policy Position (DECLG, 2014), the Climate Action and Low Carbon Development Act 2015 and the draft National Mitigation Plan (DCCAE, 2017) provide the policy framework for these actions. These in combination with EU-level emissions targets for 2020 and 2030 will inform and specify the short-term actions and longer-term strategies to advance mitigation and adaptation actions (EPA, 2016). Similarly, the UNECE Air Convention, the EU Clean Air Package and the resulting European and national legislation set the agenda and policy framework for addressing air quality issues.

EPA Climate Research

A sustained Climate Research Programme is an essential component of Ireland's role in meeting its requirements under The Paris Agreement 2015, the Climate Action and Low Carbon Development Act (2015), the UNECE Air Convention, the EU Clean Air Package and the United Nation's Sustainable Development Goals (UN SDGs) and is committed to aligning our research to assist in the delivery of these goals.

The EPA Climate Research priorities include:

- Supporting the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050. This is will be done through developing the public, policy makers and the research community understanding of what this objective means in an Irish context and how it might be achieved.
- Developing integrated approaches and growth opportunities through management of the challenges that arise from climate change, air quality and other environmental issues.

The EPA Research Programme has been allocated funding of approximately € 1.14m for new commitments in Climate research in 2017.

The EPA Climate Research Pillar is structured into four thematic areas of research as follows:

- Carbon Stocks, GHG Emissions, Sinks and Management Options
- Climate Solutions, Transition Management and Opportunities
- Ireland's Future Climate, its Impacts, and Adaptation Options
- Air science

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

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[1] *Ireland's State of the Environment Report 2016 – Environmental Protection Agency 2016*

Funding Structure

The EPA invites research proposals for a Research Fellowship on Air Quality Open Data. This R**esearch Fellowship** will be for 24 months with an indicative budget of up to €150,000.

Value for Money

All research proposals must **build on findings and recommendations** from past and current research[2] projects (where relevant) and **demonstrate value for money**.

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 and can be maintained by the EPA after the completion of the project.

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

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, '2017 Quick guide to the EPA online portal (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 '2017 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 <u>EITHER</u> OF THE ABOVE DEADLINES MEANS YOUR PROPOSAL WILL NOT BE CONSIDERED FOR FUNDING

2. Call Content

Air Science

The aim of research under this theme is to provide the analysis necessary for the achievement of clean air and co-benefits for climate, health, environment and society, to inform pathways for achievement of highest air quality standards in Ireland, and to advance integrated assessments of air pollution and wider environmental issues. In particular, the objectives of this theme are:

1. To advance analyses of emissions, transport and removal of air pollutants and increase understanding and awareness of the impacts of air pollutants;
2. To improve national inventories and projections of emissions over a wide range of pollutants including heavy metals and POPs;
3. To identify and promote emissions abatement options which can enable Ireland to achieve the highest air quality standards.

Project Title: **Air Quality Open Data**
Project Type: **Research Fellowship**
To make an application under this topic area, you must use the following **Call Topic Reference**:
Climate 2017 Call - Project 10

Background:

Open data on environmental pollution levels is identified as a 'high value dataset' need on the Open Knowledge Ireland list. The EPA already provides near-real-time data on ambient air quality to the public in a readily understandable format via the Air Quality Index for Health (AQIH) and in graphical form on the air quality pages of the EPA website. The importance of air quality monitoring data on predicting potential impacts for human health means that the near-real-time data the EPA releases needs to be of acceptable quality and confidence.

The objective of this air quality open data pilot is to assess the feasibility of developing automated quality assessment checks (e.g. completing primary data validation steps) to apply to certain air quality parameters to make the process of releasing air quality data of acceptable confidence more quickly.

The EPA, in collaboration with the Vlaams Gewest (CORVE/AIV), the Flanders Environment Agency (VMM) and the Norwegian Institute for Air Research (NILU), has been awarded a 24-month project: CORONA-EU under the EC Connecting European Facility (CEF) call on Public Open Data. This project will run from June 2017 to the end of April 2019. The aim of the project is to release more near-real-time air quality open data in each of the three project partner member states (Ireland, Belgium and Norway). The EPA will lead the specific project action to develop automated quality assessment checks as a proof of concept for a small number of air quality parameters. Other project partners will lead actions to build an open data repository, develop tools to help citizens and scientists visualise and use air quality open data and to assess the impact of air quality open data at the end of the project.

Objectives & Expected Outputs:

It is expected that proposals submitted under this topic would include:

- Developing and testing of prototype pre-processing tools and procedures for a selected set of reported parameters to assess the feasibility of using data screening tools to enable publication of near-real-time air quality data of acceptable quality.
- Analysis of the sources of air quality information in Ireland, the purpose and objectives of air quality open data publication and the current barriers to open data publication.
- Support of EPA led publication of air quality open data to an open data repository.

- Development and testing of prototype innovative visualisation tools for experts and citizens to derive more insight from air quality open data – building on and complementing current tools like the Air Quality Index for Health (http://www.epa.ie/air/quality/).
- Analysis of the impact of publishing air quality open data (national and international practices).

It is expected that the Research fellow will work in close collaboration with the CORONA-EU project and the EPA, including participation in project meetings via video-conference.

Expected outputs for this Research Fellowship include:
- Prototype of air quality screening tools for test parameter(s) and an assessment of their feasibility for use by the EPA Air Quality team;
- Summary report on of the aims of and barriers to air quality open data in Ireland;
- Prototype of air quality visualisation tools;
- Summary report on the impacts of air quality open data publication;
- Synthesis report which provides a clear non-technical summary of the research;
- Dissemination 2-pager which will be used to disseminate the findings of the research to the key stakeholders.

The list provided is indicative and relevant alternatives will be considered in light of the detail in project proposals received. Outputs from this project MUST build on existing research and information available. Please refer to **Section 3** for more information regarding EPA-funded expected outputs.

Project Structure and Funding:

It is expected that this project will be a **24 month Fellowship**, with an **indicative** budget of up to **€150,000** (which includes a 5% provision for communication costs[3]). Please refer to the *2017 Guide for Applicants* for further details.

It is envisaged that Research Fellow will be based in the EPA Offices in Dublin 14. **Therefore, the overhead rate for this project will be fixed at 10%**. The overheads rate applicable to Research Fellowships, which is based on number of days worked at host institution, are listed in the table below **for information / comparison purposes**.

Project type:	Research Fellowships		
Days per working week at Host Institution	0-1	2-3	4-5
Applicable overhead rate	10%	20%	30%

Applicants are asked to complete the normal budget template available from the Application Form on the online EPA Grant Application & Management system, keeping in mind that the overheads will be revised accordingly during the Negotiation process, if the proposal is successful.

It is recommended that Fellowship applicants identify a host organisation and supervisor prior to submission of completed proposals. **In the event that a host organisation cannot be identified by the submission deadline**, the applicant may **register** on the EPA Grant Application & Project Management Portal under the Organisation entitled: **'Organisation to be confirmed'**. A suitable host organisation must be identified during the review stage**. Failure to do so will disqualify the application**.

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[3] *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).*

3. Expected Outputs

For all projects submitted under the 2017 Climate Call, 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.
- **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 **_2017 Guide for Applicants_**, **_2017 Guide for Grantees_** and the **_EPA Terms and Conditions of award_** for the **full list** of interim and final reporting requirements.

It is also expected that a number of **dissemination outputs**, such as posters, leaflets, newsletters, policy briefs, peer-reviewed publications and presentations, will arise from the project.

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 related policies.

4. Indicative Timeframe

13th June 2017:	**Call Opening**
12th July 2017 (5pm):	**Deadline for queries relating to the technical contents of this call**
19th July 2017 (5pm):	**Deadline for submission of applications** by applicants
28th July 2017 (5pm):	**Organisation Approval Deadline** for authorisation by Research Offices
July/September 2017:	**Evaluation Process**
September/October 2017:	**Negotiation**[4]
November 2017:	**Grant Award** of Successful Project

5. 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 to keep up-to-date with all of our activities

Additional Documents available from the EPA website:
http://www.epa.ie/pubs/reports/research/opencalls/currentcalldocuments/
- *2017 EPA Research Guide for Applicants*
- *2017 EPA Research Guide for Grantees*
- *2017 EPA Research Terms & Conditions for Support of Grant Awards*
- *2017 Quick guide to the EPA on-line portal (How to make an application)*
- *EPA's Open Data and Open Access Rules*

All queries MUST be submitted to research@epa.ie .
All queries, other than on the submission process, must be submitted by 12th July 2017, 5pm at the latest. No queries will be entertained afterwards.

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[4] *The EPA may consider calling the shortlisted applicants for interview at this stage.*