

EPA Research - 2015 Call

EPA Research – Climate Research Call 2015

Technical Description



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

The EPA Research Programme is funded by the Irish Government.

Environmental Protection Agency Research Call 2015: Climate

This document provides the Technical Description for the Environmental Protection Agency Climate Research Call 2015. Applicants should read the following carefully and also consult the other documentation provided (i.e. Guide for Applicants, 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.

The EPA Research Programme has been allocated funding of approximately €2.54m for new commitments in Climate Research. The EPA Research Programme addresses a broad range of environmental issues including those that lie beyond its regulatory remit such as indoor air quality.

The EPA Climate Research Pillar is structured into 4 thematic areas of research as follows:

Theme 1: Carbon Stocks, GHG Emissions, Sinks and Management Options

Theme 2: Ireland's Future Climate, its Impacts, and Adaptation Options

Theme 3: Climate Solutions, Transition Management and Opportunities

Theme 4: Air science

Funding Structure

The EPA invites research proposals under the specific topics listed in the table below. These proposals will be Desk Studies, Medium Scale Projects or Research Fellowships. For the purposes of this call a Desk Study will last from 6 to 18 months with an indicative cost range of €50,000 to €150,000. A Medium Scale Project will typically last from 24 to 36 months with an indicative cost range of €100,000 to €350,000. A Research Fellowship will typically last from 24 months with an indicative cost range of €120,000 to €200,000.

Value for Money

All research proposals must **build on findings and recommendations** from past and current research 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 being 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.) then 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 EPA after the completion of the project.

Call Topic Ref.	Thematic Areas and Project Titles	Budget (€) per project
Theme 1: Carbon Stocks, GHG Emissions, Sinks and Management Options		
Climate 2015_Call-Project 1	Analysis of spatial patterns of Agricultural land use and management practices and potential impact on GHG emissions and removals	€120k -€160k
Climate 2015_Call-Project 2	Verification of Greenhouse Gas emission (and other pollutants) using advance modelling techniques	€200k -€250k
Climate 2015_Call-Project 3	Survey and monitoring of properties of degraded and pristine Wetlands in Ireland which impact on GHG emissions and removals	€200k -€300k
Theme 2: Ireland's Future Climate, its Impacts, and Adaptation Options		
Climate 2015_Call-Project 4	Climate Ireland (Phase III)-fully operational climate information platform	€100k -€150k
Climate 2015_Call-Project 5	Climate Ireland (Phase III) content: development of further content for climate information platform, including, Sectoral adaptation guidelines	€100k -€150k
Climate 2015_Call-Project 6	Large urban area adaptation	€190k -€240k
Climate 2015_Call-Project 7	Implementation of adaptation preparedness indicators	€90k -€130k
Climate 2015_Call-Project 8	Mainstreaming climate change adaptation	€90k -€110k
Climate 2015_Call-Project 9	EC-Earth: Global Climate Modelling	€120k -€160k
Theme 3: Climate Solutions, Transition Management and Opportunities		
Climate 2015_Call-Project 10	Costing climate change adaptation impacts and adaptation in Ireland	€100k -€120k
Climate 2015_Call-Project 11	The cost of fossil fuel lock-in in Ireland	€200k -€250k
Theme 4: Air science		
Climate 2015_Call-Project 12	Support of Activities at Mace Head Atmospheric Research Station	€150k - €175k
Climate 2015_Call-Project 13	Source apportionment of air borne pollutants transported to and across Ireland	€210k - €250k

Climate 2015 Call-Project 14	Contribution of particulate matter from diesel vehicles and exposure of the population to these emissions.	€210k -€250k
Climate 2015 Call-Project 15	National mapping of GHG and non-GHG emissions sources	€175k -€210k

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, '2015 Quick guide to the EPA online portal (making an application), is available for download at <http://www.epa.ie/pubs/reports/research/call2015>

What to include in the application form:

To make the best application possible, it is recommended that you read the '2015 EPA Research guide for applicants' before drafting and submitting an application, available at <http://www.epa.ie/pubs/reports/research/call2015> .

To make an application under any of the topic areas:

Applicants must use the correct **Call Topic Reference**, as indicated in this document, from the drop down menu on the EPA online system e.g. *Climate 2015 Call Project 1*

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

2. Call Content

Theme 1: Carbon Stocks, GHG Emissions, Sinks and Management Options

Research undertaken under this thematic area aims to improve understanding of greenhouse gas emissions and sinks thereby providing better information to support actions to mitigate emissions and enhance sinks. Research in this area contributes to improving inventory and projections methodologies for estimation of emissions and sinks of Greenhouse Gases (GHGs), and verification of these by independent analysis.

The estimation of emissions and sinks of GHGs from agriculture and land use remains a key uncertainty within Land Use, Land Use Change and Forestry (LULUCF). The dynamic of land use within Ireland is not fully understood, particularly the impact of management of land within agriculture. Analysis is required to assess the potential of this activity on a national scale. The potential for greenhouse gas emissions and removals from peatlands due to the impact of human activities, are also a cause of on-going concern.

The 2015 Theme 1 call is focused on elements of this work.

Project Title:	<i>Analysis of spatial patterns of Agricultural land use and management practices and potential impact on GHG emissions and removals</i>
Project Type:	Research Fellowship
<i>To make an application under this topic area, you must use the following Call Topic Reference:</i>	
Climate 2015 Call - Project 1	

Description

Under the United Nations Framework Convention on Climate Change, (UNFCCC), Ireland makes an annual report on greenhouse gas emissions related to land management. Agriculture is the dominant land use in Ireland and can have an important impact on the landscape and the carbon stocks within the landscape.

Previous research funded by the EPA has successfully constructed a coherent database of agricultural land use based on the descriptors provided to the Department of Agriculture, Food and Marine, as part of their administration of various payment schemes via the Land Parcel Information System, LPIS. However, the current analysis of activity data is unable to capture the underlying land management dynamic on permanent grasslands. The lack of specific information on grassland use increases the uncertainty in regard to greenhouse gas emissions and sinks. This could be reduced with more specific land use information.

The EPA seeks to advance the analysis of land use and land management to a level where inter-annual changes can be identified. In the first instant, the change in the agricultural landscape is of primary interest.

Fellowship Description:

The EPA invites proposals for a research into advanced methodologies for the detection of changes in grassland use and management using high spatial resolution GIS databases. The study will use data from the Land Parcel Information System collated by the DAFM, and ancillary data (including remote sensing) where LPIS cannot identify land use or practice. The study should include development of tools to detect change in reported land use and instances of lands entering and exiting the system, and build a statistically robust representation of changing in grassland use and management over time.

Access to the LPIS database is restricted, therefore it is foreseen that the successful candidate will liaise for extended periods within the EPA.

The study will require close collaboration with appropriate agencies and stakeholders within various sectors.

Applications

Applicants should have a qualification or equivalent experience in a relevant discipline.

Knowledge or experience of the following issues is recommended:

- GIS and analysis techniques
- Detailed report writing skills
- Good interpersonal and communication skills

Applicants are required to complete the relevant fellowship application form.

Project Structure and Funding:

The fellowship award will be up to **24 months**, with the potential for an additional year.

The indicative funding range is between **€120,000** and **€160,000** (which includes a 5% provision for communication costs¹ please refer to the 2015 Guide for Applicants for further details).

Awards will be made in line with the Irish Universities Association recommended salary scales.

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.

¹ 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: *Verification of Greenhouse Gas emission (and other pollutants) using advance modelling techniques*

Project Type: Medium Scale Study

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

Climate 2015 Call - Project 2

Description

The provision of independent scientific verification of emissions estimates submitted by Parties to the Convention reporting under the UNFCCC and its Kyoto Protocol is a major research challenge. Advances in measurement technologies, remote sensing and the application of advanced modelling analysis have demonstrated significant potential towards achieving this goal. The development of observation networks, such as the Integrated Carbon Observation System, ICOS, will deliver an unprecedented stream of in situ greenhouse gas observation data which can serve to constrain various analyses.

The data for these network sites will provide an invaluable contribution to advancing top down verification of data provided by bottom up analysis of activities and processes. This project aims to advance the analysis of these data and to address national reporting requirements.

Project description:

The EPA invites proposals for a medium scale study to develop advance inverse modelling techniques to independently verify emissions sinks and sinks of carbon dioxide (CO₂) and methane (CH₄) in Ireland based on data from key boundary sites. The inversion techniques should also be piloted for analysis of other pollutants routinely monitored at sites in Ireland.

It is anticipated that this work will be carried in out in close cooperation with the EPA, Met Éireann and other bodies in Ireland that are working on analysis of GHG emissions and sinks.

It will seek to advance analysis of background levels of GHGs and drivers of variation including the uptake and release of carbon dioxide from vegetation and soils, and methane emissions across all sectors. This will include iterative analysis of sources and sinks and their potential contributions to observations

Ireland is closely engaged with ICOS. In partnership with Laboratoire des Sciences du Climat et l'Environnement, LSCE, the EPA has invested in observation systems at key Irish boundary locations i.e. Mace Head, Carnsore Point and Malin Head.

The research group will engage actively with ICOS, LSCE, and other with key stakeholders during the project.

Expected outputs include a project report of key findings, recommendations and an outline of research activities undertaken during the project, and data products where relevant.

Project Structure and Funding:

This project is a Medium Scale Project which will run for 24 months. The indicative funding range is between €200,000 and €250,000 (which includes a 5% provision for communication costs² please refer to the 2015 Guide for Applicants for further details).

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).

Project Title: *Survey and monitoring of properties of degraded and pristine Wetlands in Ireland which impact on GHG emissions and removals*

Project Type: Medium Scale Study

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

Climate 2015 Call - Project 3

Description

Wetlands, primarily peatlands, constitute between 14% and 20% of Ireland's land area. The estimate varies because of the different ways in which peatland can be defined, which depends on context. Peatlands also constitute a very large store of carbon. Management of peatland is of particular interest because of the potential impact of management on this carbon store. In general, drainage of peatland leads to very significant carbon losses, in the form of emissions of carbon dioxide to the atmosphere.

In order to assess the potential response of peatlands to changes in management and climate change itself, the EPA wishes to establish a robust and representative database which characterises peatland types in Ireland, including field observation of key parameters and indicators. The EPA also wishes to develop capacity in the modelling of the response of peatlands to changes in management and climate, which allow estimation of emissions and removals of greenhouse gases in response to anthropogenic interventions in the landscape.

The EPA recognises the considerable investment in peatland research over many years, driven by a variety of environmental and other concerns. Therefore it is important to recognise the wider community of researchers and stakeholders who can play an active part in meeting the objectives set out here, and to build and consolidate existing work.

Proposals are invited for a research project to undertake the following:

A representative field survey of peatlands under a variety of land use and land management regimes. The survey should include measurement and observation of a suite of key parameters and indicators. Due attention should be paid to previous field studies and existing databases, in order to avoid duplication, and to add value to these

The range of parameters should include:

- Peat depth
- Bulk density
- Carbon content
- Nutrient status
- Drainage class
- Indicator species

An objective of the proposal should be to establish the relationships between types of land use and management and changes in physical, chemical and ecological characteristics of the peatlands.

The study should differentiate between raised bogs, blanket bogs and fens. It should also differentiate between practices such as peat extraction, shallow drainage and deep drainage for grazing/fodder, rewetting of previously drained land and restoration. This could involve a process model or empirical modelling approach, but should link to other data sources which would enable implementation of the model approach at a national scale.

Another objective of the proposal should be to evaluate the national requirement for long term monitoring sites on peatlands and to establish at least one site to address the most urgent need.

Expected outputs for this project include:

Expected outputs include an interim report in year 1, including:

- a review of national need for monitoring capacity on peatland sites
- a literature review of current models used to assess peatland status
- Stakeholder engagement and workshop on measurement, monitoring and modeling of peatlands in Ireland

End of project outputs:

- a database of field observations from representative peatland types
- a suitable model for estimation of the impact of anthropogenic interventions on peatland
- establishment of a long term monitoring site on a priority peatland type, and recommendations for further development of sites.
- an final report of research activities undertaken during the project

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for **24-36** months.

The indicative funding range is between **€250,000** and **€300,000** (which includes a 5% provision for communication costs³ please refer to the 2015 Guide for Applicants for further details).

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).

Theme 2: Ireland's Future Climate, its Impacts, and Adaptation Options

Research under this thematic area aims to provide information on future climate conditions in Ireland and their impacts. This information will create the basis for better informed decision making on adaptation in the years to come and make key economic and policy sectors more resilient to the effects of climate change.

The research focus of this thematic area is to improve climate observations and projections, identify risk and vulnerability and inform adaptation responses. In recent years, research has progressed on climate modelling, climate analysis, development of observation systems and indicators. This information has been used in impact analysis, risk and vulnerability assessment.

The outputs from these assessments have been designed to support sectoral and local level planning and decision making in the context of climate change. At a broader scale it also develops a basis for provision of future Climate Services as identified by Joint Programme Initiative- Climate and Horizon 2020.

The 2015 Theme 2 call aims to advance aspects of work in this area.

Project Title: *Climate Ireland Phase III – Operational phase*

Project Type: **Medium Scale Study**

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

Climate 2015 Call - Project 4

Description

The publication of Ireland's National Climate Change Adaptation Framework (2012) called for the incorporation of adaptation into spatial and sectoral planning practices. This is expected to become mandatory under the forthcoming Climate Action and Low Carbon Bill (2015). This poses a challenge to decision makers who, in the context of the adaptation decision making need to enhance their understanding of adaptation, and subsequently transition through the planning and managing phases of that process.

In response, the EPA-funded project Ireland's Climate Information Platform (ICIP) was proposed as the web-based resource, Climate Ireland, to facilitate decision makers to transition through the adaptation planning cycle. Following from the developments carried out as ICIP Phase 1 (Discovery Platform) and ICIP Phase 2 (Pre-operational Climate Change Information Platform), a final Phase 111 is now required to bring the system to an operational standard.

Proposals are invited for a research project to undertake the following:

The EPA invites proposals for a study, which will focus on the migration and deployment of the current project based system to a fully operational national resource and the subsequent maintenance and further development of the resource. ICIP currently has a significant data-handling requirement and this is expected to increase as additional climatic and other (social, economic and environmental) information becomes available. As a result, the migration, storage and on-going maintenance of these data by a dedicated data infrastructure with advanced data handling capacity is required. In addition, and in order to allow expand for the growing information base, the infrastructure developed must be both portable and expandable.

Once operational and in order to ensure a high level of system service and performance, comprehensive technical support will be required to ensure the continued operation, maintenance and trouble shooting of the system and to provide technical updates as required. In addition, continued development of the system (look-and-feel, information and tools) will be

required to ensure that the system meets evolving users requirements and expectations. It is also expected that the ICIP Phase 3 technical development team will work closely with the content development team.

Expected outputs for this project include:

- fully operational national resource
- maintenance and further development of the resource

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for **12** months.

The indicative funding range is between **€100,000** and **€150,000** (which includes a 5% provision for communication costs⁴ please refer to the 2015 Guide for Applicants for further details).

Awards will be made in line with the Irish Universities Association recommended salary scales

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).

Project Title: *Climate Ireland Phase III Content: development of further content for climate information platform*

Project Type: Medium Scale Study

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

Climate 2015 Call - Project 5

Description

The publication of Ireland's National Climate Change Adaptation Framework (2012) called for the incorporation of adaptation into spatial and sectoral planning practices. This is expected to become mandatory under the forthcoming Climate Action Bill and Low Carbon (2015). This poses a challenge to decision makers who, in the context of the adaptation decision making need to enhance their understanding of adaptation, and subsequently transition through the planning and managing phases of that process.

In response, the EPA-funded project Ireland's Climate Information Platform (ICIP) was proposed as the web-based resource, Climate Ireland. Following from developments carried out as ICIP (Phase 1 and Phase 2), a final Phase 111 is now required to continue the process of developing decision supports, guidelines, outreach and capacity building. This will require the further engagement of existing and new end users (sectoral decision makers in particular), continued development of targeted information and supports to facilitate the assessment of climate change impacts, vulnerability, risk and adaptation planning. This process will also necessitate working closely with the key stakeholder groups (data providers and end users) and the ICIP Phase 3 technical development team.

Proposals are invited for a research project to undertake the following:

The EPA invites proposals for a medium scale study to address existing and key ICIP information gaps and in particular the development of user-centred information, guidelines and decision support for sectoral decision-making for climate adaptation. In particular sectoral specific guidelines are expected to be supported by a range of tools developed in collaboration with end users. This process will involve working closely with key sectoral stakeholder and data providers to identify and assess availability of information, the quality of this information, and facilitate sharing of information between data providers and end users. The expected outcomes are user-centred information, guidelines and decision support.

In addition, the climate change adaptation knowledge base is growing on a national and international basis and the continued assessment, incorporation and tailoring of this information into a national climate information platform forms a key project requirement. In order to gain traction as an operational resource, there is a requirement for the continued training of users in the application of ICIP and its decision support mechanisms and also the promotion of ICIP as Ireland's key support for the climate adaptation planning.

Expected outputs for this project include:

- User centered information, guidelines and decision supports for sectoral adaptation decision making
- Tailored climate change adaptation knowledge
- Training material and outreach to end users

- Promotion of climate Ireland as a key national resource of adaptation planning

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for **12** months.

The indicative funding range is between **€100,000** and **€150,000** (which includes a 5% provision for communication costs⁵ please refer to the 2015 Guide for Applicants for further details).

⁵ 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: *Large urban area adaptation*

Project Type: **Medium Scale Study**

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

Climate 2015 Call - Project 6

Description

The built environment ranges from public and private buildings to critical infrastructure systems including energy, transportation and telecommunications. Much of this environment was designed with limited knowledge of climate variability and extreme events, and was located in areas increasingly vulnerable to climate change impacts. Climate change is expected to undermine the ability of some of this environment to perform its intended functions, while producing costly damage, both directly to buildings and infrastructure and indirectly through loss of economic productivity and opportunities.

Proposals are invited for a research project to undertake the following:

The EPA invites proposals for a medium scale study of the responses of a large scale built coastal environment to extreme events as well as gradual climate change.

The study should be able to assess the potential for cascading effects across interdependent systems and demonstrate how buildings and infrastructure can be designed to simultaneously support greenhouse gas mitigation and adaptation.

This will require an understanding of the risks posed by current and future climate change to the management of cities, and to suggest innovative adaptation options. Taking a regional approach, the study should also be able to account for the role of the wider hinterland in the management of climate risk in the urban setting. This will also necessitate an understanding of the governance arrangements that exist between sectors and layers of government.

Expected outputs for this project include:

- Assessment of selected built environment responses to (recent) extreme events as well as gradual climate change
- Assessment of built environment in terms of vulnerability and resilience
- Assessment of built environment in terms of both adaptation and mitigation potential
- Economic evaluation of adaptation option costs and benefits.
- Recommendations for management approaches that integrate both adaptation and mitigation responses

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for **24** months.

The indicative funding range is between **€190,000** and **€240,000** (which includes a 5% provision for communication costs⁶ please refer to the 2015 Guide for Applicants for further details).

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).

Project Title: *Implementation of adaptation preparedness indicators*

Project Type: Desk Study

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

Climate 2015 Call - Project 7

Description

Indicators are central to monitoring, reporting and evaluation of the adaptation process and progress. A set of adaptation indicator should be able to assess levels of local and sectoral preparedness for climate change, communicate such information, facilitate informed adjustment of adaptation actions and inform national and international reporting requirements on adaptation to climate change. A draft set of national level adaptation indicators is currently being developed by CMRC⁷, at UCC, under an EPA project, to allow for the monitoring of Irelands progress towards climate change adaptation and to meet international reporting requirements. These indicators need to be rolled out and trailed for efficacy across sectors and local authorities.

Proposals are invited for a research project to undertake the following:

The EPA invites proposals for a desk study to facilitate the implementation of the proposed Adaptation Preparedness Indicators by local authorities, sectors and national government. This will entail a strong stakeholder engagement element allowing capacity building and providing practical support in order to utilise developed indicators to their full potential.

This should also include testing them in reality, looking to integrate adaptation indicators into practice with local authorities and sectors.

Once testing is completed, the draft indicators should be refined into a complete indicator package, which includes guidelines on both use of current indicators and a methodology for the development of new adaptation indicators for future use.

There should also be a strong link to on-going and potential future work with Climate Ireland and in line with Local Authority guidelines so that all these building blocks fit together for the target audiences local authorities and sectors; on a practical level and on a high level to facilitate collection of relevant information for on-going national reporting to Europe.

Expected outputs for this project include:

- Recommendations as to a set of robust indicators that can easily be monitored at the sectoral and local level to enable national and international reporting on adaptation
- Guidelines on both use of current indicators and a methodology for the development of new adaptation indicators for future use.

Project Structure and Funding:

This project is a **Desk Study** which will run for **12 months**.

The indicative funding range is between **€90,000** and **€130,000** (which includes a 5% provision for communication costs⁸ please refer to the 2015 Guide for Applicants for further details).

⁷ <http://www.cmrc.ie/projects/developing-adaptation-indicators-for-ireland.html>

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: *Mainstreaming climate change adaptation*

Project Type: Desk Study

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

Climate 2015 Call - Project 8

Description

Mainstreaming is recognised as an important policy mechanism for progressing the implementation of climate change adaptation. The European Commission is acting to mainstream adaptation measures into EU policies and programmes, as the way to ‘climate-proof’ EU action. Across the Member States mainstreaming is a key instrument for the implementation of adaptation action into sectoral policies and programmes (EEA, 2014). In Ireland, the National Climate Change Adaptation Framework (2012) recognises the potential role of policy mainstreaming as an effective mechanism to address adaptation across the full breadth of economic and development decision-making.

Proposals are invited for a research project to undertake the following:

The EPA invites proposals for a desk study to undertake an assessment of the national and sectoral opportunities to mainstream climate change adaptation within existing adaptation decision making process.

The assessment will analyse the efficacy of National policy instruments to promote adaptation at sectoral and local level, in line with national priorities and in areas where adaptation is mainstreamed in EU policies. It will consider the policy barriers and opportunities available to various sectors/areas with an interest in climate change adaptation.

Additionally, the study will consider the mainstreaming of adaptation in insurance or alternative policy instruments and where relevant, to provide incentives for investments in risk prevention.

Expected outputs for this project include:

- Assessment of national, sectoral and local level policy instruments for mainstreaming opportunities
- Recommendations on future opportunities for mainstreaming climate change within National, sectoral and local decision making processes

Project Structure and Funding:

This project is a **Desk Study** which will run for **12** months.

The indicative funding range is between **€90,000** and **€110,000** (which includes a 5% provision for communication costs⁹ please refer to the 2015 Guide for Applicants for further details).

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: *EC-EARTH: Global Climate Modelling*

Project Type: **Research Fellowship**

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

Climate 2015 Call - Project 9

Description

[EC-EARTH](#) is a consortium of European National Weather Services and academic institutes collaborating on the development of a global Earth System Model (ESM) that can be used for providing projections of the future climate. The consortium contributed simulation data to the Coupled Model Intercomparison Project Phase 5 (CMIP5) and has advanced plans to contribute to CMIP6; these datasets provide the scientific underpinning for the IPCC Assessment Reports.

A new state-of-the-art ESM is currently under development, coupling the atmosphere, ocean/sea-ice, land-processes, the carbon cycle, atmospheric chemistry and ocean biogeochemistry. The atmospheric component is based on the global operational forecast system of the European Centre for Medium-Range Weather Forecasts.

Apart from supporting CMIP6, the climate simulations performed with the new ESM will be available for downscaling over Ireland to provide high resolution information on the local climate.

Met Éireann is an active partner in EC-Earth, representing Ireland's main contribution to global climate modelling.

The EPA understand the importance of the further development of climate models, and the key role they play in providing best available analysis of the potential impacts of Climate Change, and adaptation needs. Therefore the EPA wishes to support Ireland's contributions to EC-EARTH.

Proposals are invited for a research project to undertake the following:

The fellowship will involve working closely with Met Éireann and the international EC-Earth group. The researcher will engage on cross disciplinary tasks related to the on-going development of the EC-Earth ESM. The specific tasks will be determined by the development programme of EC-Earth, and the specialisms which the researcher can bring to this work; it is expected that these will include

- tuning the new ESM to reduce systematic errors;
- running simulations in support of CMIP6;
- downscaling sample outputs over Ireland to check the realism of the ESM's ability to capture extreme events (e.g. extremes in short-period precipitation) in the past climate.

The researcher will need to be flexible in terms of the work programme.

The outputs of the EC-Earth project will be key to informing and refining analysis of potential impacts of climate change in Ireland, and on-going assessment of adaptation needs. As such, the fellow will be encouraged to engage with the wider stakeholder community in the effective communication of climate information to a range of end users, for example through the Climate Information Platform for Ireland project.

Applications

Applicants should have a PhD and post doctoral experience, or equivalent, in a relevant discipline e.g. Meteorology, Climatology, Computational Physics, Engineering. Good computing skills are essential, particularly in high performance computing in a Linux/Unix environment.

It is anticipated that this person will work closely with experts in these areas within Met Éireann and EC-EARTH.

The applicant should demonstrate excellent communication skills, the ability to work within a diverse team, and strong time and project management skills.

Project Structure and Funding:

The fellowship award will be up to **24 months**, with the potential for an additional year.

The indicative funding range is between **€120,000** and **€160,000** (which includes a 5% provision for communication costs¹⁰ please refer to the 2015 Guide for Applicants for further details).

Awards will be made in line with the Irish Universities Association recommended salary scales.

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.

¹⁰ 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: Climate Solutions, Transition Management and Opportunities

Research priorities are informed by our vision under this theme of “a carbon neutral Ireland by 2050, with a thriving green economy and society” and the new national policy position on climate change aiming “to achieve transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050” and mandating low carbon roadmaps. Research under this call is planned to build on existing Irish climate research and analysis such as “Addressing Climate Change Challenges in Ireland” research report (O'Reilly, O'Brien et al, 2012), “Irish TIMES Energy Systems Model” (Ó Gallachóir et al, 2013) and “Ireland and the Climate Change Challenge; Connecting ‘How much’ to ‘How to’” (NESC, 2012).

The following research objectives have been identified under this theme;

1. To advance socioeconomic modelling of cross sectoral greenhouse gas emissions to 2050;
2. To promote cross disciplinary analysis of effective options for behavioural change in businesses and households and to identify and assess current and future mitigation options including technologies; and
3. To bring together diverse research outputs to form a coherent picture of analysis for Ireland and in so doing, to identify green economy and other opportunities from international trends in policy and economics.

Significant progress has been already been achieved in building cross-sectoral modelling capacity. This call aims to engage a broad range of academic disciplines in examining the core questions and sectoral challenges behind transition management and identification of climate solutions and opportunities.

Project Title: *Costing climate change impacts and adaptation in Ireland*

Project Type: Desk Study

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

Climate 2015 Call - Project 10

Description

The Stern Review concluded that the overall costs of unabated climate change would equate to losing at least 5% of global GDP annually, with a risk that this figure could rise considerably. The study emphasised that the benefits of strong, early action on mitigation and adaptation would greatly outweigh the costs of inaction. The current and future costs and benefits of climate change adaptation remain to be fully quantified in Ireland. As a core criterion of adaptation option selection, information is needed on the economic costs of impacts on climate sensitive assets and economic activities in the short, medium and long term. This should include the cost of both action and inaction.

Proposals are invited for a research project to undertake the following:

The EPA invites proposals for study to assess the costs and benefits of climate change for public and private budgets in Ireland (i.e. damage costs with presently agreed mitigation but without adaptation measures), and scope the information where full assessment is not yet possible. Therefore a consistent framework will need to be developed and applied to all fields of activity/sectors set out in national policy and legislation. Climate scenarios should be interpreted according to each sector's special needs for certain climate parameters and indices. Instead of delivering a grand total cost sum for all sectors with a top-down assessment from some average climate triggers, this project should ideally apply a bottom-up approach, acknowledging sector-specific risks and trends. The developed framework for assessing costs of climate change should help in prioritisation of adaptation measures, by focusing on areas which are/will be affected most by current and projected climate change impacts.

In addition to information on the costs and benefits of adaptation it would be useful to have an indication about financing sources for the different types of adaptation, i.e. the share of public, private and mixed funding in grey, green and soft actions. This would give a clearer picture of the respective distribution of financial responsibilities. Finally, it would be useful to include an assessment of the role (current and future) of the insurance industry in climate change adaptation.

Expected outputs for this project include:

- Assessment of sectoral costs and benefits of climate change adaptation in Ireland
- Assessment of the role of insurance industry in climate change adaptation in Ireland
- Recommendations on funding sources for climate change adaptation action

Project Structure and Funding:

This is a **Desk Study** which will run for **12-18 months**.

The indicative funding available is **€100,000 to €120,000** (which includes a 5% provision for communication costs¹¹ please refer to the 2015 Guide for Applicants for further details).

¹¹ 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: *The Cost of Fossil Fuel Lock-In in Ireland*

Project Type: **Medium Scale Study**

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

Climate 2015 Call - Project 11

Description

The 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) has identified global carbon budgets associated with different levels of climate change in terms of temperature change, including for the long term goal adopted by the UN to keep the global temperature increase below 2C. Meeting this goal requires transformation to a low carbon future. The International Energy Agency (IEA), has identified known fossil reserves which if used would significantly exceed the carbon budget and identified these as “unburnable carbon”.

In this context, it is of interest to assess Ireland’s carbon assets as well as the infra-structure that has been developed to facilitate their use. In addition investments in such assets may also have limited returns.

Research is required to assess Ireland’s potential exposure to this issue and potential economic implication for current and further investments including in infrastructures. The aim is to provide analysis that can inform and assist decision makers identify the extent of potential lock-in, policy options and inform investments strategies and options. The extent of barriers to transition to low carbon technologies and options that may arise from carbon lock in should also be considered.

Proposals are invited for a research project to undertake the following:

- A review of literature
- Identify, catalogue and assess fossil assets, infrastructures and support system in Ireland
- Benchmark these using similar studies in other developed countries in the EU and more widely
- Consider valuations of these assets and how these may be projected
- Assessment of consequences of current carbon lock-in and investments issues and options

Expected outputs for this project include:

- Interim report with literature review
- A stakeholder workshop
- A final report

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for 24-36 months.

The indicative funding available is **€200,000 to €250,000** (which includes a 5% provision for communication costs¹² please refer to the 2015 Guide for Applicants for further details).

¹² 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 4: Air science

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

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

Topic areas include attribution of air pollutant emissions to economic sectors in order to inform effective actions and improvement of inventory and Projections of emissions under National Emissions Ceilings Directive (NECD) and CLRTAP/Gothenburg.

Project Title: *Support of Activities at Mace Head Atmospheric Research Station*

Project Type: **Research Fellowship**

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

Climate 2015 Call - Project 12

Description

The Mace Head atmospheric research station is a World Meteorological Organisation/ Global Atmospheric Watch (WMO/GAW) site. It is recognised globally for long-term observational activities. These include observations of aerosols, which commenced in 1958 and of greenhouse and other gases since 1987. The site has excellent facilities and is supported by the National University of Ireland, Galway and in part by the Environmental Protection Agency and by Met Éireann. It has also attracted significant international funding through the EU Framework programmes and from wider international sources e.g. US NASA funded AGAGE and National Science Foundation (NSF) funded AEROCE programmes, as well as shorter-term research projects and measurement campaigns.

Fellowship description:

An international review of GAW sites in Ireland¹³ headed by the World Meteorological Organisation found that Mace Head was of unique importance but lacked institutional support. It recommended that steps should be taken to address the lack of support. In order to respond to this and to further develop research into issues of national and regional interest at Mace Head applications for a researcher to work at Mace Head are requested.

It is anticipated that the work to be carried out would address the following topics:

- Provide assessment of hemispheric transport of pollutants through analysis of data for Mace Head
- Develop and support systems and tools for reporting of data from Mace Head to relevant national and international bodies
- Support on-going research programmes and projects at Mace Head as agreed between the EPA and NUIG
- Publish or contribute to papers and reports on work carried out at Mace Head
- Develop systems and tools for data collection and for reporting to national and international bodies and archives

Expected outputs include support to the operational activities at Mace Head, analysis of data and preparation of publication of findings in relevant peer review journals, an end of project report.

Applicants are expected to have a primary or higher degree in physics, engineering or a linked discipline and be familiar with data collection, management and analysis.

This research award will be for an initial period of two-years.

Applications:

Applicants are expected to have a primary or higher degree in physics, engineering or a similar discipline and be familiar with data collection, management and analysis. It is anticipated that this

¹³ Review of the Global Atmospheric Watch sites at Valentia and Mace Head, Ireland, Barrie L. and Puckett K. ERC report No3, EPA, (2006)

person will work closely with experts in these areas within the EPA, other state agencies and government departments and international experts.

Project Structure and Funding:

The fellowship award will be up to **24 months**, with the potential for an additional year.

The indicative funding range is between **€120,000** and **€190,000** (which includes a 5% provision for communication costs¹⁴ please refer to the 2015 Guide for Applicants for further details).

Awards will be made in line with the Irish Universities Association recommended salary scales, and to include

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.

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: *Source apportionment of air borne pollutants transported to and across Ireland*

Project Type: **Medium Scale Study**

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

Climate 2015 Call - Project 13

Description

Monitoring of background air pollution along the west coast of Ireland has indicated the transport of air borne pollutants to Ireland is not insignificant. It would be instructive to learn the source of these pollutants transported to Ireland as well as pollutants identified in major urban centres in order to aid policy development in the promotion of clean air.

This project calls for the use of mass spectrometers, aethalometers and other relevant devices to look at air borne pollutants (chemical composition of particulate matter and black carbon in particular) at the west and east coasts and at Dublin (the country's largest urban centre) with a view to improving the understanding of air borne pollutants transported to and across Ireland with a particular focus on source apportionment.

The researchers should link this work to regional air quality models and satellite imagery, in particular that data generated by the Copernicus MACC (monitoring atmospheric composition and climate) project. The work should also inform policy on how to achieve the National Emissions Reduction Target for PM_{2.5}. In this regard it should be possible to use the data for analysis of the achievement of the CAFÉ Directive requirements with respect to PM_{2.5} and PM₁₀.

As an additional piece of work the researchers are asked to consider the potential to relate historical "black smoke" data to modern measurement techniques. This should, if possible, include using a "black smoke" measurement device of the type used in the 1980s and monitoring air quality alongside a modern device. A review of long term trend in air quality in Dublin would then be carried out based on data from historical and modern measurement techniques.

Expected outputs for this project include:

- Detailed literature review.
- Final report, which should provide a clear and detailed account of all the steps and methodologies used during the project.
- Synthesis report (20-30pp) which provide a clear non-technical summary of the research.
- Dissemination 2-pager, which will be used to disseminated the findings of the research to the key stakeholders.
- Workshop/dissemination event 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. A dedicated website/webpage should be created and maintained presenting the project and work carried out to date. It is also expected that a number of disseminating outputs such as policy briefs, peer-reviewed publications and presentations will arise from this project.

Project Structure and Funding: *Project Structure and Funding*

This project is a **Medium Scale Project** which will run for **24** months.

The indicative funding available is **€210,000 to €250,000** (which includes a 5% provision for communication costs¹⁵ please refer to the 2015 Guide for Applicants for further details).

¹⁵ 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: *Contribution of particulate matter from diesel vehicles and exposure of the population to these emissions*

Project Type: **Medium Scale Study**

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

Climate 2015 Call - Project 14

Description

Diesel vehicles are understood to have comparatively high levels of particulate emissions, which are known to have an adverse effect on human health. This project is to estimate the contribution of PM_{2.5} levels that can be attributed to emissions from diesel vehicles and the exposure of people to such emissions. In this regard the researchers should be able to distinguish particulate matter emissions from diesel vehicles with those from other sources, e.g. coal. The study should be representative of all potential sources of exposure.

The project will carry out an analysis of available data as well as monitoring of concentrations at locations where potential for high exposure has been identified. The project will assess to what extent the EPA's ambient air quality network covers exposure to diesel vehicle emissions. As part of this work the researchers shall consider the contribution from public transport systems as well as privately operated vehicles. The researchers will then assess the exposure of commuters to pollutants from diesel vehicles. The work should also estimate how this situation will change as the fleet is modernised. The work shall be related to the National Emissions Reduction Target for PM_{2.5}.

Expected outputs for this project include:

- Detailed literature review.
- Final report, which should provide a clear and detailed account of all the steps and methodologies used during the project.
- Synthesis report (20-30pp) which provide a clear non-technical summary of the research.
- Dissemination 2-pager, which will be used to disseminated the findings of the research to the key stakeholders.
- Workshop/dissemination event 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. A dedicated website/webpage should be created and maintained presenting the project and work carried out to date. It is also expected that a number of disseminating outputs such as policy briefs, peer-reviewed publications and presentations will arise from this project.

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for **24** months.

The indicative funding available is **€210,000 to €250,000** (which includes a 5% provision for communication costs¹⁶ please refer to the 2015 Guide for Applicants for further details).

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).

Project Title: *National mapping of GHG and non-GHG emissions sources*

Project Type: **Medium Scale Study**

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

Climate 2015 Call - Project 15

Description

The EPA must report on emissions of a wide range of pollutants that come under the scope of the CAFÉ Directive, the Convention on Long Range Transboundary Air Pollution (CLRTAP) and the UN Framework Convention on Climate Change. This project is to map emissions sources for all the pollutants that come under the scope of the aforementioned legal agreements.

The sources must be mapped temporally as well as spatially.

In this regard, the following output requirements are specified:

1. Mapping of all pollutants that come under the scope of the three legal agreements mentioned above (as annual total emission). Priority shall be given to those pollutants that come under CLRTAP as these maps are a legal requirement.
2. A separate map for each source category.
3. The best possible spatial resolution for all the pollutants identified under the three legal agreements, which should be specified and must be consistent with scaling to the European Monitoring and Evaluation Programme (EMEP) grid.
4. Maps of the source activities to include temporal variation throughout the year (at an appropriate resolution/time-step).

In producing a map it is important to use the guidance under the relevant legal agreement for the pollutant concerned. The sources must be based on current inventories and the outputs should be in a format to facilitate further analysis. It is envisaged that the researchers will work very closely with the EPA on this project.

Expected outputs for this project include:

- Maps for all pollutants as per the required specifications in an electronic format that can be used for subsequent analysis and that are consistent with the standard Geographical Information Systems.
- Detailed literature review.
- Final report, which should provide a clear and detailed account of all the steps and methodologies used during the project.
- Synthesis report (20-30pp) which provide a clear non-technical summary of the research.
- Dissemination 2-pager, which will be used to disseminated the findings of the research to the key stakeholders.
- Workshop/dissemination event 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. A dedicated website/webpage should be created and maintained presenting the project and work carried out

to date. It is also expected that a number of disseminating outputs such as policy briefs, peer-reviewed publications and presentations will arise from this project.

Project Structure and Funding:

This project is a **Medium Scale Project** which will run for **24** months.

The indicative funding available is **€175,000 to €210,000** (which includes a 5% provision for communication costs¹⁷ please refer to the 2015 Guide for Applicants for further details).

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).

3. Expected Outputs

For all projects submitted under the 2015 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 **2015 Guide for Applicants**, **2015 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.

If you create a Twitter account, please let us know, so we can add you to our [list of EPA funded projects](#) and promote your content to our followers.

It is also expected that a number of **dissemination outputs**, such as 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 climate-related policies and the protection of our environment.

4. Indicative Timeframe

12th June 2015:	Call Opening
10th July 2015 (5pm):	Deadline for queries relating to the technical contents of this call
17th July 2015 (5pm)	Deadline for submission of applications by applicants
29th July 2015 (5pm)	Organisation Approval Deadline for authorisation by Research Offices
August/September 2015	Evaluation Process
September/October 2015	Negotiation¹⁸
November 2015	Grant Award of Successful Projects

¹⁸ The EPA may consider calling the shortlisted applicants for interview at this stage.

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](https://twitter.com/eparesearchnews) to keep up-to-date with all of our activities

ALL QUERIES, OTHER THAN ON THE SUBMISSION PROCESS, SHOULD BE SUBMITTED BY THE 10TH JULY 2015, 5PM AT THE LATEST.

Research@epa.ie MUST BE COPIED IN ALL EMAILS. NO QUERIES WILL BE ENTERTAINED AFTERWARDS.

6. Additional Documentation

Additional Documents available at <http://www.epa.ie/pubs/reports/research/call2015>

- *2015 EPA Research Guide for Applicants*
- *2015 EPA Research Guide for Grantees*
- *2015 EPA Research Terms & Conditions for Support of Grant Awards*
- *2015 Quick guide to the EPA on-line portal (How to make an application)*