



# Met Éireann's Weather and Climate Research Programme

## Call for Proposals



## Terms and Conditions

November 2024



# 1 Met Éireann's Research Call 2024 - Important call information

## 1.1 Met Éireann's Weather and Climate Research Programme

### *Science Serving Society*

Met Éireann's Weather and Climate Research Programme underpins the expertise and knowledge needed to enable the delivery and continuous improvement of national predictive capability in the areas of weather, climate and hydrology and to ensure that, particularly in the climate context, research outputs provide the evidence and tools necessary to inform government policy and action.

Met Éireann's Weather and Climate Research Programme's mission is to contribute to the development of national capacity and to address key scientific questions in response to the challenges and opportunities facing Ireland from an extreme weather and changing climate's perspective.

Met Éireann welcomes research in the spirit of diversity, inclusivity, cooperation, co-creation, collaboration, open data and multidisciplinary.

## 1.2 Objectives

Met Éireann's Research Call 2024 is a competitive research call for applications, open to all Irish Higher Education Institutions. The research topics of specific interest are described in sections 1.3-1.5 below.

### 1.3 Topic 1: TRANSLATE Programme

Met Éireann is seeking application to support the third iteration of the TRANSLATE Programme. This Topic is aimed at standardising and mainstreaming national climate projections for Ireland across timescales and scenarios and developing climate services to enhance Ireland's resilience to climate change by supporting the Irish adaptation sector's and decision maker's climate information requirements. The TRANSLATE Programme aims to achieve the following objectives:

1. To develop the highest quality, standardised national climate projection dataset from annual to climate timescales.
2. To develop scalable and reproducible climate services focused on translating climate information into practice to support effective risk-based decision making under uncertainty.

3. To enhance the uptake of climate information and climate services for decision making via the effective translation of climate services research.
4. To enhance the communication across all audiences so society can better engage with climate change and its associated uncertainty.
5. To support the National Framework for Climate Services (NFCS) in strengthening the national climate services community across the researcher – practitioner – policy maker interface.

The TRANSLATE Programme underpins many essential national and local climate directives. It feeds directly into the National Framework for Climate Services (NFCS) to support climate services development, coordination and standardisation across the country. It underpins projections for Climate Ireland, the national portal for climate adaptation. It is embedded within the National Adaptation Framework (NAF) and the National Climate Change Risk Assessment (NCCRA) and as a result supports local climate action plans and sectoral adaptation plans mandated by Government. It is therefore critical that information and services from the programme remain relevant and robust to ensure policy and decisions are based on the most accurate and up to date climate information, as well as ensuring that decision makers have access to the highest quality climate data when required and consistency across planning cycles.

Met Éireann is seeking applications to specifically address three research themes described as Sub-topic 1.1, Sub-topic 1.2 and Sub-topic 1.3 below.

#### 1.3.1 Sub-topic 1.1: Underpinning Data

Expected deliverables include:

- 1) Updated TRANSLATE national climate change scenarios.
- 2) Development of a standardised national annual to decadal dataset in line with the existing TRANSLATE ensemble and methodology if appropriate.
- 3) To develop relevant reproducible and scalable climate services from both datasets.

For **Sub-topic 1.1**, proposals of **maximum 48 months'** duration and with a **maximum budget of €600k** are sought.

#### 1.3.2 Sub-topic 1.2: Understanding risk of climate extremes

Expected deliverables include:

- 1) Published review on changing climate extremes in Ireland across time horizons and scenarios.
- 2) Catalogue of past extreme events and how these could change in the future.

- 3) Case studies on multiple or compound events – (extreme events or events leading to extreme impacts).
- 4) Case studies on changing risk.
- 5) Development of reproducible event-based climate storylines building from TRANSLATE programme.

For **Sub-topic 1.2**, proposals of **maximum 48 months'** duration and with a **maximum budget of €600k** are sought.

### 1.3.3 Sub-topic 1.3: Climate Services

Building on outputs from the TRANSLATE Programme, scalable and reproducible climate services focused on translating climate information into practice to support risk-based decision making are sought. Key elements of each climate service should focus on the communication and integration of climate information and uncertainty through climate storylines or otherwise. All audience types should be considered, (i.e. youth, public, decision makers, policy makers etc.). All climate services developed are to be based on standardised projections as defined in earlier sub-topics.

Climate services to be considered should include:

1. Multi-sectoral climate services.
2. Multi-hazard/compound climate services.
3. Sector specific climate services.
4. Systems approach to climate services.

For **Sub-topic 1.3**, proposals of **maximum 24 months'** duration and with a **maximum budget of €300k** are sought.

### 1.3.4 Achieving synergies and collaboration

**Applicants are invited to apply for each Sub-topic separately.**

Applications will be reviewed and considered independently. It is not mandatory to apply for more than one Sub-topic. Synergies and collaborations across the whole TRANSLATE Programme are however strongly encouraged. Should an applicant (and their possible collaborators) apply for more than one Sub-topic, proposals should indicate their relationship with one another. Applicants should demonstrate how synergies between Sub-topics could be achieved. Successful applicants will be expected to collaborate closely with other Sub-topics across the programme and with Met Éireann. For a more detailed description of the TRANSLATE Programme and Sub-topics, please contact [researchfunding@met.ie](mailto:researchfunding@met.ie).



## 1.4 Topic 2: Multi-hazard flood forecasting

Flooding is a critical natural hazard in Ireland, with increasing risks due to climate change and extreme weather events. Historically, coastal and fluvial floods have been studied separately, but regions where these systems converge, such as estuarine areas, are vulnerable to a combination of these flood hazards. This topic aims at developing an integrated multi-hazard forecasting model that combines coastal and fluvial flood dynamics. By focusing on Ireland's key estuaries, the topic aims to improve our understanding of the interaction between river discharge, tide and storm surge, providing valuable insights for flood risk management.

Below is a description of some of this Topic's expected outcomes:

- Review of current and best practice approaches to coupled fluvial-coastal modelling.
- Data requirements for coupled modelling and gaps which may exist in current observation networks.
- Development of coupled flood models that integrate both coastal and fluvial systems.
- Simulation of different flood scenarios (e.g., heavy rainfall coinciding with high tides).
- Testing and validation of the models in regions historically vulnerable to both coastal and fluvial floods.
- Recommendations for flood forecasting strategies.
- Coupled fluvial-coastal model which could potentially be deployed in an operational setting.
- Identification of observational and environmental data requirements to ensure the ongoing future development of coupled modelling systems in-line with best international standards.

The topic's scope includes data collection, model development, testing, and simulation under different flood scenarios.

For **Topic 2**, proposals of **maximum 24 months'** duration and with a **maximum budget of €400k** are sought.

## 1.5 Topic 3: Weather radar (Dual-Pol) applications

Ireland's weather radar network provides critical information on real time precipitation over Ireland. Data and products from the network are key inputs to the weather forecasting and warning production processes in Met Éireann. An upgraded weather radar network with additional dual-polarisation weather radars is planned to provide an enhanced weather service to Ireland and to bring this essential infrastructure in line with European norms. To support this expansion, two research gaps are of interest: 1) identification & mitigation of wind turbine interference, as wind energy development continues to grow and 2) the use of dual-polarisation data to monitor hail as it can have a significant impact to road operations.





Below is a description of this topic's two areas of interest.

#### 1.5.1 Sub-topic 3.1: Impact of Wind Turbines on Dual-Polarisation Weather Radar Data

Some of the expected outcomes here included:

- Investigate & report on the effect of wind turbines on polarimetric variables (e.g. ZDR,  $\Phi$ DP,  $\rho$ HV) including the latest state-of-the-art.
- Development of a software tool which can be implemented in the real-time operational signal processing and radar data processing chain to minimize the effect of the wind turbines using the data from the new dual-pol radar at Shannon and additional radars in the expanded network.

#### 1.5.2 Sub-topic 3.2: Hail monitoring & alerting

Some of the expected outcomes here included:

- Investigate & report on case studies of hail events using dual-pol weather radar data, data from Transport Infrastructure Ireland (TII)'s hail monitoring network and numerical weather prediction models.
- Literature review of hydrometeor classification algorithms for dual-pol weather radar data.
- Development of an application which uses dual-pol weather radar data, numerical weather prediction model data and data from the TII hail monitoring network and provides forecasters with the tools to monitor and alert of hail events in specific areas.

For **Topic 3**, proposals of **maximum 36 months'** duration and with a **maximum budget of €600k** addressing one or more Sub-topics are sought.

For each topic, access to all the necessary data will be made.

For more information, please contact Met Éireann's Research Funding Office by email to [researchfunding@met.ie](mailto:researchfunding@met.ie).

## 1.6 Dates

- Call open: **Tuesday 12<sup>th</sup> November 2024.**
- Call deadline: **Friday 10<sup>th</sup> January 2025 at 17:00.**
- The system will automatically prevent application submission after the deadline.
- Organisation approval deadline: **Friday 17<sup>th</sup> January 2025 at 17:00.**
- Results expected: Q1 2025.

## 1.7 Submission platform

Please use the Met Éireann grant platform to submit your application following the instructions therein: <https://meteireann.smartsimple.ie>.

## 1.8 Support

If you have any questions on the topics and application process, please contact Met Éireann's Research Funding Office by email to [researchfunding@met.ie](mailto:researchfunding@met.ie).

## 2 Budget

Research Call 2024 covers the provision for the salary of early-career, mid-career and/or senior researchers (as appropriate) and contribution to research expenses. **Below is the max. budget and the max. projects' duration for each Research Call 2024's application:**

Topic	Max. Budget (k€)	Max. Projects' duration (years)
1. TRANSLATE Programme		
Sub-topic 1.1 - Underpinning Data	600	4
Sub-topic 1.2 - Understanding risk of climate extremes	600	4
Sub-topic 1.3 - Climate Services	300	2
2. Multi-hazard flood forecasting	400	2
3. Weather radar (Dual-Pol) applications	600	3

### 3 Requirements

A lead applicant will be requested to closely collaborate and ensure knowledge transfer with Met Éireann and its stakeholders. International collaboration is encouraged.

**Support to early career researchers** is also strongly encouraged and the **recruitment of PhD researchers** to carry out part of this research is advised, where possible. Met Éireann PhD researchers are required to be given a minimal annual stipend of €25,000.

### 4 Governance Structure

To ensure each Project is implemented in line with best practice, Project steering committees of experts will be established. Prior to this, Project evaluation boards will be established to select the most appropriate research proposals.

### 5 Indicative Project timelines

The following are Met Éireann Research Call 2024's indicative timelines:

November 2024	Research Call 2024 Publication
January 2025	Applications Deadline
January/February 2025	Applications Evaluation
Q1 2025	Research Call 2024 Outcome
Q2/Q3 2025	Successful Applicants begin Projects

### 6 Additional information

#### 6.1 Supporting Data

Applicants should provide evidence that existing datasets are available and accessible (either reference open databases or provide a statement of ownership or letter from the data owner to say it will be made available). All Project proposals must clearly define the research question, methodology, expected outputs, expected impact and dissemination activities.



For Met Éireann hosted data, the relevant members of Met Éireann staff should be contacted prior to submission to ensure availability (contact [researchfunding@met.ie](mailto:researchfunding@met.ie) if you require specific information/contact details).

## 6.2 Host institute and location

The Host organisation must be a Higher Education Institution in Ireland.

As the successful research Projects will be components of a larger Met Éireann Research Programme, member(s) of the successful team may be required to attend meetings in one of the Met Éireann offices (and/or remotely whenever required). This is to ensure integration of the research activities and outputs into the wider programme, and also to provide access to the facilities and data required.

## 6.3 Definitions

**Project** – the Project is the overall research Project as proposed by the Applicant. It should be of sufficient scale to deliver the research outputs and include nominated staff positions (e.g. Postdoctoral Researchers) as appropriate for the work.

**Host organisation** – this must be a Higher Education Institution in Ireland<sup>1</sup>. Valid tax clearance certificates must be supplied on request.

**Applicant** – the Applicant is the person responsible for submitting, leading and managing the Project. They must be employed or planned to be employed in the host organisation and will act as the primary point of contact. They must hold a qualification/have relevant experience in the aspect of the work to be undertaken (this must be demonstrated in their CV).

**Collaborators** – Collaborators have a specific role in the Project but do not receive funding. They may be providing expertise, data etc. as appropriate to support the Project.

**Authorised person** – the Application must be signed by the Research Office/Authorised Official of the host organisation. The signature indicates the organisation's willingness and ability to host the award in terms of financial, human and physical resources required.

## 6.4 Eligibility

All criteria listed in the definitions must be adhered to.

Applications from researchers who are currently outside Ireland are only eligible if the Applicant will be physically and administratively hosted in an organisation in Ireland, full-time, for the duration of the award.

CVs for the Applicant and each Collaborator must be submitted with the proposal and must demonstrate the ability of each to carry out their responsibilities within the Project.

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<sup>1</sup> As recognised by <https://hea.ie/higher-education-institutions/>.  
For any clarification, please contact [researchfunding@met.ie](mailto:researchfunding@met.ie).

## 6.5 Researcher profile and CVs

The Applicant must include, as part of their Project description, a CV which should be no longer than 4 pages and must include:

- Contact details
- Recent employment history
- Academic qualifications or equivalent experience
- Publications
- Other information relevant to the proposal\*

Collaborators must attach a CV which should be no longer than 4 pages and must include:

- Contact details
- Recent employment history
- Academic qualifications or equivalent experience
- Key Publications
- Other information relevant to the proposal\*

\* e.g. for all information regarding funding secured to date:

- You must clearly state your role in any Project listed (Lead/PI/Partner)
- If you were an unfunded collaborator this can be included but it must be clearly stated you were not funded.
- Any funding awarded/decision pending must clearly state how much funding has been/may be awarded to the Applicant and not the total value of the Project to the whole consortium or institute.

Misrepresentation of research grants awarded/pending is considered a serious breach of ethics and terms and conditions. Any misleading information found in applications for funding will result in the application being returned without review. Information provided may be queried with other named funding agencies if necessary.

## 6.6 Submission

The call comprises a **two-stage application process**. Full proposals must be first submitted using the <https://meteireann.smartsimple.ie> submission platform before the call deadline. Any applications not adhering to submission and formatting rules, or received after the deadline, will be deemed ineligible and will not be reviewed. Officials from Research Offices will then review submitted proposals and accept or reject applications for evaluation on behalf of the HEI. Research Offices official will be invited to register with <https://meteireann.smartsimple.ie> in advance and assigned authorised approver role by Met Éireann's Research Funding Office.

Proposals must be submitted by **5pm, Friday 10<sup>th</sup> January 2025**.

Organisations must approve applications by **5pm, Friday 17<sup>th</sup> January 2025**.

## 6.7 Impact

The outputs of the Project will be expected to be integrated into the wider Met Éireann's Strategic Plan and activities. Details of how this can be achieved must be included in this section.

This section should also comprise any additional impacts; positive impacts on two or more of the following should be described:

- Scientific discovery.
- Development of new methodology/toolkits.
- Development of new software/prototypes, and/or
- Significant contribution to policy and governance.

This section should clearly show how the Project will impact these areas and whether the expected impact is short, medium or long term. This section is a maximum of 2,000 words.

## 6.8 Communication and dissemination plan

Dissemination of the Project outputs are expected as standard and a clear communication plan should be clearly described including timing of known conferences, events, outreach activities, etc. This section is a maximum of 2,000 words.

## 6.9 Budget

All values must be presented in Euro.

### 6.10 Eligible costs

Examples of eligible costs (list not exhaustive)

- Total salary costs of the team members (including all pension, taxes etc.)
- Consumables (e.g. access fees)
- Software licenses
- Publication fees
- Travel
- Indirect costs

Examples of non-eligible costs (list not exhaustive)

- Salary/staff costs for other staff in the Host or Collaborator organisations (including mentors)
- Maintenance contracts
- Office equipment/furniture
- Durable equipment

If there are any queries regarding eligible and non-eligible costs please contact [researchfunding@met.ie](mailto:researchfunding@met.ie) before submitting your proposal.

Financial reports signed by the Institute finance office will be required annually. Payments will only be made once these are received and approved by Met Éireann. Projects can be co-funded by cash/in-kind contributions from Collaborator organisations though this is not a requirement; in such cases, the total cost of the Project including the partner contributions and Met Éireann funds requested must be included. In-kind contributions can include personnel time, access to facilities, access to existing data, etc.

### 6.11 Budget Justification

This section should clearly justify the planned expenditure including expected timings. This section is a maximum of 1,000 words.

### 6.12 Project description

**This section should be uploaded as a separate PDF and comprise in no more than 20 pages:**

(i) **Strategic context** and rationale for the Project including background information, state of the art and reasons for addressing the issue now. The Project should also clearly demonstrate how the results of the research will be incorporated into the wider programme of work in Met Éireann's Strategic Plan and/or how the research will bring added value to that programme.

(ii) **Objectives** and scientific/engineering targets beyond the state of the art. This should outline how the Project will expand our knowledge beyond current understanding and clearly outline the objective of the planned work.

(iii) **Methodology & Implementation plan** should include the approach to be used along with timelines, milestones for the Project and any information relevant to the efficient management of the Project.

(iv) **Outputs.** The outputs should be well defined, ambitious and realistic. They should link clearly to the milestones and timing of the Project as well as the budget. Details must be provided alongside some examples, e.g.

- New models,
- New digital dataset(s),
- Development of new methods, equipment, techniques, technology or cross-disciplinary applications, and
- Presentations at international conferences and publications in high impact journals.

Text font in the file submitted should be no smaller than Arial 11 with page margins no less than 2.5cm. Only PDF files will be accepted.

### 6.13 Reporting

The Project must be completed within the designated time. Annual reviews will be scheduled before the start of the Project. These will include written activity and financial reports. In

In addition to the reports submitted as required deliverables throughout the Project, a final report summarising the Project's results must be submitted at the end of the Project. Failure to submit these reports on time will result in payments being withheld and/or exclusion from subsequent Met Éireann calls. Reporting templates will be provided.

As part of the reporting procedures, successful applicants may be asked to present their results (oral or poster presentation) at Met Éireann event(s).

If the annual reports indicate that the Project is (i) not adhering to the terms and conditions, (ii) is significantly behind schedule, and/or (iii) is not adhering to the Projects described in the contract, Met Éireann reserves the right to withdraw funding.

Additional costs may be requested if clearly justified however, funding is not guaranteed. Please contact [researchfunding@met.ie](mailto:researchfunding@met.ie) if you have queries.

#### 6.14 Review process and criteria

Once received, all applications will be checked for eligibility. Projects that are deemed ineligible, beyond the scope of the call, or not responding to Project requirements will not be reviewed. Eligible applications will be reviewed by experts and assessed under the following criteria:

- Quality of Scientific/Engineering Project described (40%);
- Impact (25%);
- Quality of the proposed team including Applicant and Collaborators (25%);
- Implementation, management plan and value for money (10%).

Please remember, the review panel will include international experts who may be unfamiliar with specific Irish acronyms etc.

The review panel will also include a senior member of the Met Éireann Weather and Climate Research Call Programme team to ensure relevance to the Programme. For this reason, Applicants may not contact Met Éireann staff to solicit information, lobby or discuss potential Project applications. All queries must be directed to the Met Éireann's Research Funding Office at [researchfunding@met.ie](mailto:researchfunding@met.ie). Applicants breaching this rule will be deemed ineligible.

#### 6.15 Ethics

All proposals are expected to adhere to standard ethics rules (see Ethics guidance example<sup>2</sup>). Where organisational ethics guidelines are in place, the Applicant is expected to adhere to their ethics committee's guidelines.

#### 6.16 Open research policy

Met Éireann and the Department of Housing, Local Government and Heritage support the National Open Research Forum policies. Applicants are expected to follow the National

<sup>2</sup> <https://erc.europa.eu/manage-your-project/ethics-guidance>

Framework on the Transition to an Open Research Environment, including open access to publications and data.

### 6.17 Non-compliance

Where proposals or awards are found to be non-compliant as per these Terms and Conditions or in breach of Contract, Projects will be deemed ineligible (at initial review stage) or funding may be withdrawn.

### 6.18 Confidentiality

All applications and subsequent correspondence with applicants will be treated as confidential and will follow GDPR regulations. By submitting your application, you are agreeing to the Department of Housing, Local Government and Heritage's GDPR policy.<sup>3</sup>

### 6.19 Acknowledgement

Met Éireann, the Department of Housing, Local Government and Heritage and the Government of Ireland must be clearly acknowledged in all activities and outputs including publications, conference presentations, reports, events, etc. Logos will be made available and must be included in all dissemination and communication activities. Met Éireann funded researchers are required to present their projects at a Met Éireann event. All dissemination and communication activities must be recorded and included in the final report. Project outputs, dissemination activities and achievements may only be incorporated into non-Met Éireann reports if included as an 'associated project' and duly acknowledged. It must be made clear in all references to the Project's activities that the work is funded by Met Éireann. Both Met Éireann and the Grantee will agree on a text at the start of the Project to be included in all disseminations and communications, subject to review.

### 6.20 Intellectual property and data management

Foreground Intellectual Property (IP) will remain with the Grantee, however, where research or product(s)/service(s) result from Met Éireann Research Funding, the Grantee shall, upon request from Met Éireann, provide Met Éireann with a perpetual, royalty free, non-exclusive license to the outputs of the Project. Where data is collected as part of a Met Éireann funded Project, a copy of the raw data must be provided to Met Éireann and, where relevant, standard data formats should be used (e.g. INSPIRE). Specific terms and conditions relating to data use and data storage will be determined before the start of the Project on a case-by-case basis.

### 6.21 Programme management

Any queries regarding the application process or Project description should be submitted by email to [researchfunding@met.ie](mailto:researchfunding@met.ie).

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<sup>3</sup> Available upon request