



**Geological Survey Ireland Geoscience Research Programme
Targeted Projects Call 2023
- Terms and Conditions -**

Call Timeline:

Deadline for Open Topic information 12noon, Tuesday September 5th 2023

Deadline for Applications: 12noon, Thursday October 5th 2023

Estimated date of results: November 2023

Contract signing: November/December 2023

Project Start date: January – March 2024

Objectives of the Geological Survey Research Programme

The Geological Survey Ireland Research Programme supports excellent geoscience research in Ireland. Research themes are broad ranging, however individual applications are expected to clearly define the proposed project within the scope of the call and describe the added value for relevant Geological Survey Ireland programmes where appropriate.

The aim of the programme is to address key scientific questions, build capacity, increase research impact and strengthen research teams in the area of geoscience on the island of Ireland. Under this call, proposed projects should incorporate GSI data, and/or generate research outputs or data, that will be taken-up by GSI programmes (e.g., [Tellus](#), [Marine and Coastal science](#), [Minerals](#), [Groundwater](#) and [Geothermal](#) Unit, [Geological Mapping](#)) or are relevant to national and international policy or regulation. It is expected that the research outputs will also be of use to policy makers, SME or industry partners, the wider research community, and/or other relevant stakeholders. It is envisaged that all projects funded under the Research Programme Targeted Projects Call 2023 could lead to further research and development applications in the areas funded.

Projects utilising GSI funded geoscience infrastructure (e.g. equipment funded/co-funded under the [2021 GSI Equipment Call](#), SFI Infrastructures and the [Earth Surface Research Laboratory](#) at Trinity College) are particularly encouraged. The ESRL carries out analysis for the GSI Tellus programme and provides analytical facilities for bulk-rock and soil geochemistry research. Available instruments include wavelength dispersive XRF, energy dispersive XRF, a multi-element analyser and a Mercury analyser. For further information please see the ESRL website and the review process information below.



Summary of Targeted Projects

The Geological Survey Ireland invites applications for innovative research or technological development proposals in a geoscience context under the Topics listed in Table 1 for the Targeted Projects Call 2023. These topics aim to fill identified gaps in our knowledge, in particular using datasets produced by and available from GSI or other open access sources. Specific outputs are expected to help inform policy and build capacity in current and emerging geoscience priority areas.

In addition to defined project Topics 1-6, the call includes a smaller scale Open Topic (more details in Appendix 1). Projects eligible for this topic must fit comfortably in the list provided in Appendix 1 and aim to provide support for policy areas covered by GSI and/or the Department of the Environment, Climate and Communications, or other relevant national or international policy or directive.

Applicants should carefully review the information provided in Scope of Targeted Projects Topics Appendix 1 of this document.

Table 1. List of topics in the Targeted Projects Call 2023

#	Title of Targeted Projects Topic	Relevant GSI Programmes	Max budget per project
1	Establishing paleoclimatic conditions and climate proxies from soft sediments and peat in Ireland	Geological Mapping	€200,000
2	Impacts of land use on soil health and the variability of soil geochemistry within peri-urban and urban areas of Dublin	Tellus Programme	€200,000
3	The use of hyperspectral geological core scanning for assessment of natural resources	Minerals / Geological Mapping / Geothermal Unit	€200,000
4	Developing a shoreline position forecasting model for soft coasts	Marine and Coastal Unit	€200,000
5	Bedrock mapping of the offshore Irish coastal and shelf regions through standard and semi-automated techniques	Marine and Coastal Unit	€200,000
6	Estimating shoreline recession rates for coastal hard cliffs using time-series elevation data and additional datasets	Marine and Coastal Unit	€200,000
	Open Topic	As relevant	€100,000

Duration of project

For both nominated Topics 1-6 and the Open Topic, the maximum duration of the project is 24 months. Projects must be completed within this time.

Definitions

Lead Applicant – the Lead Applicant is the person responsible for leading and managing the project. They must be employed in the host organisation and will act as the point of contact for the project. They must hold a qualification/have relevant experience in the aspect of the work assigned to them (this must be demonstrated in their CV). Lead Applicants cannot lead more than one project but can be named collaborators/partners on multiple projects.

Co-applicant – a Co-Applicant is a named partner within the project who is directly responsible for some element of the project. They must hold a qualification/have relevant experience in the aspect of the work assigned to them (this must be demonstrated in their CV).

Host organisation – this may be a company or Higher Education Institute based in the Republic of Ireland or Northern Ireland. *Projects hosted in Northern Ireland must include a partner from ROI with a meaningful and well-defined role.* The Host organisation is contractually responsible for the project delivery, financial management and reporting. A valid tax clearance certificates must be supplied on request.

Authorised person – the application must be signed by the authorised person for the organisation. For example, in the case of a HEI, this is expected to be the Research Office. In the case of a private sector company, this will be the person responsible for signing legal contracts. The signature indicates the organisation's willingness and ability to host the award in terms of financial, human and physical resources required.



Eligibility

For Topics 1-6 and Open Topic projects, Lead Applicants must have a contract of employment with the lead organisation for the duration of the project. Projects led by a Northern Ireland partner must include a partner from Róil (though there is no requirement for the Róil partner to be funded through the project).

CVs for the Lead Applicant and each Co-Applicant must be submitted with the proposal and must demonstrate the ability of each partner to carry out their responsibilities within the project.

Submission & application requirements

Applications must be made before the deadline using the template provided and applicants must adhere to the formatting rules. Any applications not adhering to submission and formatting rules, or received after the deadline, will be deemed ineligible and will be returned without review.

For **Open Topic** projects, information about the project subject must be submitted via email by **September 5th, 2023** to research@gsi.ie. This must include:

- (i) Project Title
- (ii) Keywords
- (iii) Summary of the key project objective(s) (max 100 words)

This information will be used to facilitate a rapid review process and identify suitable reviewers. Open Topic projects that do not submit this information by the deadline will be deemed ineligible.

All full applications must be submitted by email to research@gsi.ie before the assigned deadline, **12noon, Thursday October 5th 2023**.

Format and Layout

Text font should be no smaller than Arial 11, single-spaced, with page margins no less than 2.5cm (please do not alter the layout of the template file). All word limits outlined in the application template must be adhered to. One single PDF file will be accepted. All documents and appendices must be included in one file which must not exceed 5MB.

Budgets

All values must be presented in Euro. The contribution requested from GSI, including indirect costs, must not exceed €200,000 for the nominated Topics 1-6 and €100,000 for the Open Topic. Any projects with GSI contributions exceeding the established maximum amounts will be deemed ineligible.

Indirect costs cannot exceed 15% of the total direct costs, excluding subcontracting (direct costs include staff, consumables, travel etc.).

Subcontracting is eligible but must be justified and should not exceed 10% of the direct costs, including VAT. Higher subcontracting costs may be requested in exceptional circumstances but must be approved in advance of submission, please contact research@gsi.ie.

Projects can be co-funded by cash/in-kind contributions from partner organisations though this is not a requirement; in such cases, the total cost of the project including the partner contributions and GSI funding requested must be included in the budget table and budget justification.

In-kind contributions can include personnel time, access to facilities, access to existing data, etc.

All projects must adhere to financial rules from Department of Public Expenditure and Reform (appendix 2).

Examples of eligible costs

- Student fees (limited to €7,500 per year)
- Consumables (e.g., access fees, lab consumables, consumable items for fieldwork)
- Software licenses
- Publication fees
- Student scholarships/bursaries (maximum of €25,000 per year full time) and/or staff costs for researchers working directly on the project (time sheets can be requested)
- Travel (including fieldwork travel costs)
- Subcontracting, where necessary



Examples of non-eligible costs

- Maintenance contracts.
- Durable equipment or resources with a life span beyond the project end date.
- Staff costs unrelated to the project.
- Management or administrative costs.

Topics 1-6 and Open Topic funding should only be used for a stand-alone project that has independent workflows, outputs and deliverables that are not supported by other funds. Projects may be linked to existing or other research activities, but GSI funded outputs and activities must be clearly distinguished.

For applicants intending to use ESRL facilities, the costs should be included as both (i) an expenditure item and (ii) as in-kind. These costs will be covered by GSI under a separate agreement and should be cost neutral in the project budget, however they must be included for administration purposes. The 'Total amount requested' from GSI must not exceed €200,000 (Topics 1-6) or €100,000 (Open Topic), excluding ESRL costs.

For example:

Item	Cost €	
Personnel costs	30,000	
Student fees	7,500	
Consumables	6,000	
Travel (incl. Fieldwork)	3,500	
Other (publishing costs)	2,000	
Subcontracting (max 10% of direct costs)	7,350	
ESRL access/analysis (approx.)	5,000	
Indirect costs (max 15% of direct costs excl. subcontracting)	7,350	
Total Project Budget	68,700	←
Contribution (cash & in-kind), if applicable	5,000	
ESRL access in-kind (approx.)	5,000	
Total requested from GSI	58,700	←

If there are any queries regarding eligible and non-eligible costs, or budget calculations, please contact research@gsi.ie **before** submitting your proposal.

Budget Justification

This section should clearly justify the planned expenditure including expected timings of significant, 'once-off' expenditure. Quotes and confirmation of access (e.g., lab ESRL facilities, datasets) may be included as additional material.

Project information

1. Partner description

In this section all Co-applicants must be listed, and their information provided. Their CVs should be added to the proposal.

2. Project description

This section is a maximum length of 4000 words excluding figures and references. This should comprise:

- Strategic context and rationale* for the project including background information, state-of-the-art and reasons for addressing the issue now; this section should be approximately 500 words. The project description should clearly demonstrate how the research will add value and support aims and objectives of the relevant GSI programme(s). All project descriptions should state how the project will support the [GSI Research Roadmap](#) objectives and any other relevant national or international policies and



strategies (e.g., Impact 2030, Climate Action Plan, Geothermal Policy Statement, Critical Raw Materials Act, EU Soil Health Directive, EU Soil Strategy for 2030...etc).

- (ii) *Objectives and scientific/engineering targets beyond the state of the art.* This should outline how the project will expand our knowledge/capabilities beyond current understanding and outline clearly the objective of the planned work. If this project is an extension of existing/ongoing research, this section must clearly define only the additional work to be delivered by the project under the Topics 1-6 or the Open Topic.
- (iii) *Implementation plan* should include timelines, milestones for the project presented (a Gantt chart must be included) and any information relevant to the efficient management of the project. It should also include a risk management plan with critical risks identified and mitigation actions.
- (iv) *Outputs.* The outputs should be well defined and linked clearly to the relevant GSI Programme, policy or strategy.

Outputs/Deliverables must include a mid-term report (M13) plus a final report (including financial report) (M25). Final report must be supported by at least one of the following:

- Submission of a publication (manifestly including work funded by the Topics 1-6 or the Open Topic) to an international, peer-reviewed scientific journal. A copy of the final publication must be submitted to GSI once published.
- Inclusion in the formal programme for an international conference (presentation manifestly including work funded by the nominated Topics 1-6 or the Open Topic). A copy of the presentation must be submitted to the GSI following the conference.
- Evidence of submission to Horizon Europe or similar research call based on outputs from Topics 1-6 or the Open Topic
- Maps, models and/or digital data set(s).
- Evidence of development of new methods, equipment, techniques, technology or a cross-disciplinary project applications based on the project outputs.
- Patents, trademarks, copyrights, database rights, licenses.

All projects should include at least one of the following knowledge transfer activities:

- Knowledge exchange, e.g., direct engagement with partnerships, networks, events, professional associations, standards.
- Exhibit, outreach activities or public event.
- Digital or visual media.
- Third level short course (level 6, 7, 8 or 9).
- Professional training materials.

3. Expected impact

The impact of the project is the effect the project is expected to have on the relevant and potential sector(s)/stakeholder(s). This should not be a list of the planned outputs, but rather a description of how exactly those outputs will impact the industry, policy area and/or scientific knowledge. This section should also show clearly whether the expected impact is short, medium or long term. This section is a maximum length of 1000 words.

The project proposal should demonstrate how the results of the project will positively impact one or more of the following:

- Scientific discovery
- Improved subsurface resource assessment (e.g., minerals, geothermal energy, groundwater etc.)
- Training & education programmes (beyond project staff)
- Development of new methodology/toolkits/new software/prototypes
- Development of new datasets
- Initial studies from which the results are expected to be used for Horizon Europe/EU applications
- Positive societal impact
- Support of national policy and governance (in particular, relevant to DECC)
- Economic development and employment (beyond the project staff)
- Communications and dissemination.



Researcher profile and CVs

The Lead Applicant must include a cv no longer than 4 pages. Each Co-Applicant must include a CV no longer than 2 pages. Cvs must include:

- Contact details
- Recent employment history
- Academic qualifications or equivalent experience
- Relevant publications
- Other information relevant to the proposal or qualification of the applicant.

Where evidence is provided, certified career breaks (e.g., maternity/paternity/adoptive leave) will be excluded from any assessment of career stage or the assessment of the quality of applicant/team. For any queries regarding eligible career breaks, please contact research@gsi.ie **before** submission of the application.

**For all information regarding funding received 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 further review. Information provided may be queried with other named funding agencies if necessary.

Review process and criteria

Once received, all applications will be checked for eligibility. Projects that are deemed ineligible, or beyond the scope of the call, will not be reviewed. Applications that are eligible and align with the call research topics will be reviewed and assessed by expert panels under the following criteria:

- Quality of Scientific/Engineering project described (40%)
- Impact (30%)
- Quality and experience of applicant/team (15%)
- Implementation, management plan and value for money (15%)

Please note, panel members will not be from Ireland and may not be an expert in every aspect of a project. Project proposals should therefore be clear, informative and avoid the use of unexplained acronyms, locations or geological features etc.

Where SMEs are a partner but are not the Lead Applicant, they must have a meaningful role in the project.

Projects requesting support and access to the ESRL facilities at Trinity College must include a letter of support from the lab Director. Please contact Michael.Stock@tcd.ie. Similarly, letter(s) of support confirming access to facilities or non-GSI held data should be provided.

GSI will undertake all reviews and evaluations in a fair and equal manner. Reviewers will be made aware of policies supporting equal opportunity for all researchers (e.g., Science Europe Practical Guide to Improving Gender Equality in Research Organisations). Reviewer's comments and aggregated scores will be provided to applicants. The identity of individual expert reviewers will not be made available.



Reporting

The project must be completed within 24 months with a mid-term review carried out at month 12-13. A final report must be submitted including a non-technical summary for publication on the GSI website. The mid-term and final payments will only be made on receipt and approval of the mid-term and final report, respectively. Failure to submit the required quality reports on time may result in non-payment and/or exclusion from subsequent calls. Reporting deadlines and templates will be provided to all successful applicants. As part of the reporting procedures, successful applicants are expected to present their results (oral or poster presentation) at a GSI event.

Ethics

All proposals must adhere to reasonable ethics rules (e.g., IAPG or IGI ethics guidelines, national rules and procedures). Where organisational ethics guidelines are in place (e.g., the HEI), the Lead Applicant is expected to adhere to the relevant ethics committee guidelines.

Integrity

All applicants are expected to adhere to the [National Policy Statement on Ensuring Research Integrity](#) in Ireland and the [European Code of Conduct for Research Integrity](#).

Equality and diversity

The Geological Survey Ireland supports equality and diversity in all its activities including research funding calls. Applicants are assessed based on scientific excellence and the criteria as outlined in the call terms and conditions. Applicants will not be discriminated against on gender, disability, sexual orientation, age, race, ethnic group, civil status or family status as outlined by the [Irish Human Rights and Equality Commission](#) (guidelines will also be given to external reviewers in this regard). All Host Organisations (private or public entities) funded by Geological Survey Ireland are expected to promote fairness and equality in all aspects of the proposed research and adhere to relevant equality law.

Gender

Applicants must take into consideration gender balance of the research team and be aware of initiatives and policies promoting and supporting gender balance in the research sector (for example [HEA National Review of Gender Equality in Irish Higher Education Institutions](#)). Lead applicants must provide information in the final report regarding the composition of the research team for statistical purposes. GSI also supports the principals of the [Athena Swan Charter](#).

Maternity/Paternity/Adoptive Leave

In cases where a researcher funded by GSI avails of formal and certified maternity, paternity or adoptive leave, or other formal leave, from the host institute/employer during the term of the project, they may request a project extension. Additional funding may also be requested to fund supplementary contributions to statutory social welfare entitlements for welfare maternity/paternity/adoptive leave. All requests (with supporting, signed documentation) should be directed to research@gsi.ie a minimum of 2 months before the planned leave period begins, unplanned leave will be assessed on a case by case basis.

Non-compliance

Where proposals are found to be non-compliant as per these Terms and Conditions, projects will be deemed ineligible and returned without review. Non-compliance during implementation of successful projects may result in termination of the Grant Agreement and withdrawal of funding.

Confidentiality

All applications and subsequent correspondence with applicants and reviewers will be treated as confidential.

Acknowledgement

The Geological Survey Ireland Geoscience Research Programme must be acknowledged clearly in all activities and outputs including publications, conference presentations, reports, events etc. For written or printed material, including PowerPoint presentations, this must include a logo and written acknowledgment. High resolution image files of the relevant logos and text for acknowledgment will be made available and must be used with equal and due prominence as to that of the Host Organisation.



All dissemination and communication activities must be recorded and included in the final report.

Programme management

The programme will be managed by the GSI Research Team. Any queries should be submitted by email to research@gsi.ie.

Intellectual property and data management

IP will remain with the applicant researcher and Host Organisation, however, where commercial product(s)/service(s) result from GSI Geoscience Research Programme funding, the product/service will be provided to the GSI under a perpetual, non-exclusive, royalty-free license.

Where data is collected as part of a Geological Survey Ireland funded project, a copy of the data must be provided to the Geological Survey 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 on a case-by-case basis. GSI supports the National Open Research Forum framework for open access to research data and outputs. Data generated by these funded projects can be hosted by GSI and made available via GSI webservices.

Relevant information on GSI programmes can be found on the following websites:

www.gsi.ie

www.infomar.ie

For clarification on any of the Terms and Conditions herein please contact the GSI Research Team, research@gsi.ie



Appendix 1: Scope of Targeted Projects Topics

1. Establishing paleoclimatic conditions and climate proxies from soft sediments and peat in Ireland

Relevant GSI Programmes	Geological Mapping
Topic description	The project should utilise fine-grained soft sediments of Quaternary/Tertiary age from Irish localities (e.g., Doolin Caves, Littleton Bog, karst infill in Limerick boreholes and karst infill available at the corestore) to estimate paleoclimatic conditions and enable more informed comprehension of Ireland's environmental response and/or resilience to climate stressors. This work would initiate the establishment of a national repository for data with potential for palaeoenvironmental reconstruction. Natural climate indicators, or 'proxies', include pollen, varved clay and peat. They can be used to reconstruct past climate and likely environmental responses to climate change over time. The dating of the sediments and an assessment of their depositional environments and processes can be used to understand the physical and environmental conditions at the time of deposition, including possible environmental and climatic stresses. More specifically: • pollen density provides information on short-term climatic conditions. • Varved lake clays link to summer temperatures, winter snowfall and rainfall. • Peat can highlight wetter conditions, drought periods, human activity and land use change. Tephra layers within peat can allow for precise dating and correlation. Some studies have used membrane lipids in peat to establish annual air temperatures. Palaeo climatic environments and responses can help to inform our approach to current climate challenges and the subsequent potential environmental and biotic responses in an Irish context.
Expected project outputs	Outputs of the project should include high impact peer-reviewed publications, presentations and at least one of the following: • Design of a national, long term, repository (e.g., potentially hosted by GSI) for climate proxies and palaeoclimate reconstruction. • a suite of datasets that can be used to constrain paleoclimate conditions in other Irish settings and reduce error on past climate models. • spin-off research investigating any Irish evidence for global megafauna death at this time. • Publication of results in an appropriate peer reviewed journal
GSI data available	Quaternary and bedrock geology data and map packages, verified borehole logs, core in GSI Corestore, in-house (unpublished) geological borehole logs, National Geotech Database, GeoHeritage reports (CGS) and maps. For further information on GSI held data please see GSI data webpages or email research@gsi.ie



2. Impacts of land use on soil health and the variability of soil geochemistry within peri-urban and urban areas of Dublin

Relevant GSI Programmes	Tellus Programme
Topic description	Investigating the variability of soil chemistry within the Dublin peri-urban and urban area and the prevalence of contaminants and the relationship to changing land use and historical developments. This project should map soil chemistry both laterally as well as through the topsoil profile, with potential land use or historical industrial influences investigated which can inform guidance for future developments. The project should investigate recent (~10 years) changes in Dublin's soil geochemistry by comparing results between data collected as part of the SURGE project and more recent data collected as part of the Tellus peri-urban and urban soil sampling surveys (available from GSI). The study will also assess the 15 indices used to evaluate soil health as defined by the EU soil observatory which will support the new EU soil health directive (scheduled for 2023). Soil health indices are targeted at agricultural soils however, most people live and interact with soil within urban settings.
Expected project outputs	Outputs of the project should include high impact peer-reviewed publications, presentations and at least one of the following: • Geochemical and contaminant maps. • Contaminant & trace metal hazard maps. • Migration of contaminant and trace metals through soils. • Guidance for soil recovery & future development, including land use planning maps. • Model to determine urban soil health based on available geochemistry data and other indices.
GSI data available	Tellus soil geochemistry (A & S) for (i) G8 Block – Dublin urban, (ii) Dublin peri-urban & (iii) SURGE data. pH, LOI, ICP data sets. For more information on GSI held data please see the Tellus data webpage and the SURGE project webpage or email research@gsi.ie



3. The use of hyperspectral geological core scanning for assessment of natural resources

Relevant GSI Programmes	Geological Mapping Minerals Unit Groundwater and Geothermal Unit
Topic description	Investigating and developing novel uses of hyperspectral core scanning images (HSI) in applied geoscience. HSI is established in mineral exploration for white mica and other aluminosilicate alteration, however, there is a limited amount of work focusing on carbonate hosted mineralisation or Irish type Pb-Zn. Work has been carried out on dolomite diagenetic fabrics to determine petrographic and geochemical properties, but applications to geothermal exploration have not been studied in detail. This project should aim to use the Geological Survey Ireland's hyperspectral core scans to develop novel techniques for applying HSIs to: • Geothermal exploration and/or • Mineral exploration for Irish type Pb-Zn and/or • Mineral exploration for Critical Raw Material and strategic minerals The project may also include lithological mapping to support the proposed topic and/or the use of Artificial Intelligence for data analysis; the density of data available in HSI lends itself well to studies and this aspect should not be overlooked in the project. Core scanning is a rapid process, and the project may include the use of drill core that is available but has not yet been scanned; GSI can scan additional core for use in a project.
Expected project outputs	Outputs of the project should include high impact peer-reviewed publications, presentations and at least one of the following: • Development of new techniques using hyperspectral imagery for applied Irish geosciences. • Peer reviewed publication on new technique applied in an Irish context. • Building of capacity for hyperspectral expertise in Ireland. • AI methodologies for HIS datasets.
GSI data available	GSI Drill core hyperspectral library For more information on GSI core records and data, hyperspectral facilities and library please see the GSI website or email research@gsi.ie



4. Developing a shoreline position forecasting model for soft coasts

Relevant GSI Programmes	Marine and Coastal Unit
Topic description	Geological Survey Ireland is undertaking a National Coastal Change Assessment for informed coastal risk management. GSI is currently developing shoreline change rate maps (i.e. erosion/accretion rates) for the Irish coastline. Shoreline forecasting is the prediction of future shoreline positions and their associated uncertainty. Despite the considerable published research to describe past shoreline change, little consensus has emerged on the optimum methodology for forecasting their positions. Change forecasting models are traditionally based on calculations of historical shoreline position data and additional coastal variables, including geological aspects, sea level rise, coastal hydrodynamics, and meteorological factors. The processes driving shoreline change are complex and not always available as model inputs. The project should make use of existing historical shoreline positions and additional suitable datasets to predict shoreline position in the future, at a decadal scale. More specifically the objectives are: 1. Assessment of suitable input variables for the forecasting model 2. Develop a shoreline change forecasting model suitable for the Irish context 3. Estimate the method's uncertainty 4. Validate the model outputs
Expected project outputs	Outputs of the project should include high impact peer-reviewed publications, presentations and at least one of the following: • New forecasting methodology • Shoreline positions forecasts (at decadal temporal scale up to 2100) • Uncertainty analysis • Validation analysis • Possible inclusion in GSI Shoreline Change suite of products
GSI data available	• Shoreline Change historical shoreline positions ○ 2000 -2023 GSI shoreline database ○ Historical 18th, 19th, 20th century shorelines • Coastal Vulnerability layers • Coastal Geology maps • INFOMAR databases (near shore) • Coastal erosion and coastal flooding • Climate Action Plan 2023 • Coastal risk plans For more information please see the INFOMAR webpage, GSI webpage or email research@gsi.ie



5. Bedrock mapping of the offshore Irish coastal and shelf regions through standard and semi-automated techniques

Relevant GSI Programmes	Marine and Coastal Unit
Topic description	Geological Survey Ireland, jointly with Marine Institute, manages the INFOMAR programme. INFOMAR is Ireland's national seabed mapping programme which aims to map our seabed providing key baseline data to support coastal and inshore infrastructural and economic development, including Offshore renewable energy. Data available through the INFOMAR programme includes high resolution bathymetry, backscatter, shallow seismic, magnetic and ground truthing datasets. The project should target key areas of the coastal and shelf regions with the aim to improve existing offshore bedrock geology maps, primarily by identifying and characterising bedrock outcropping areas and depth to bedrock information. It should employ objective methods to analyse the data and extract meaningful geological information and further develop semi-automated techniques to separate boulder and coarse gravel grained cover from bedrock outcrops taking advantage of the available high resolution MBES data. It should develop data fusion mapping techniques for automation that can include other datasets (e.g., backscatter, magnetic field data) for an improved segmentation of the bedrock types, and use available shallow seismic data to further identify the bedrock outcrops and infer depth to bedrock where possible.
Expected project outputs	Outputs of the project should include high impact peer-reviewed publications, presentations and at least one of the following: • Offshore coastal and shelf bedrock maps (lithology and structure) • Depth to bedrock information • Reports
GSI data available	• GSI onshore bedrock mapping • INFOMAR datasets • INFOMAR seabed classification charts For more information please see the INFOMAR webpage, GSI webpage or email research@gsi.ie



6. Estimating shoreline recession rates for coastal hard cliffs using time-series elevation data and additional datasets

Relevant GSI Programmes	Marine and Coastal Unit
Topic description	Geological Survey Ireland is presently developing shoreline change rate information at national scale for the period between 2000 and 2022 for the soft coastal regions. The results from this assessment analyses past trends of coastal change, to indicate where potential exposure may lie in the future. The results are intended to support coastal management plans and the refinement of national and local climate adaptation plans. However, information on harder coastlines and the rate of change is lacking. Projects should focus on recent past shoreline change analysis on hard coastlines, primarily rocky cliffs, along the Irish coastline. Rocky coastal erosion (i.e., cliff retreat) is caused by a complex interaction of various forcings that can be marine, subaerial or rock mass properties. The project should include analysing the recent rate of change of coastal hard cliffs in key pilot areas where suitable data might be available. Shoreline change analysis in hard coasts can include time-series elevation data and measuring the change observed over time. Objectives: • Identify suitable pilot areas where the analysis can be performed • Measure recession rates for the pilot areas and estimate uncertainties • Investigate the main causes of recession for selected hard coastal cliffs sites
Expected project outputs	Outputs of the project should include high impact peer-reviewed publications, presentations and at least one of the following: • Shoreline recession rates database • 3D time-series models of the studied coastal sites • Scientific report • Uncertainty assessment • Possible inclusion in GSI Shoreline Change suite of products
GSI data available	• GSI Shoreline Change databases • GSI – CHERISH photogrammetry databases • GSI geology maps • GSI soils maps • Coastal Vulnerability information For more information please see the INFOMAR webpage, GSI webpage or email research@gsi.ie



Open Topic

The Open Topic provides an opportunity for applicants to propose projects within GSI's remit which directly address the aims and objectives of the GSI Research Programme and support national or international policies and strategies.

Applicants applying for the Open Topic must submit the following information by email by 12 noon, September 5th, 2023, in advance of the full proposal deadline. This is to facilitate a rapid review process.

- (i) Project Title*
- (ii) Keywords (as per the full application form)*
- (iii) Key project objectives (maximum 100 words)*

Information must be submitted via email to research@gsi.ie

Relevant GSI Programmes	As appropriate for the proposal
Topic description	The Geological Survey will support projects under the following GSI Research themes: 1. Palaeoclimate/climate impact studies using geological data (CI) 2. Groundwater resources and protection (GW) 3. Geochemistry (Gc) 4. Geophysics (Gp) 5. Geohazards & geotechnical engineering (Gz) 6. Online database delivery and management (DB) 7. Inventory and design of monitoring of geogenic methane (Me) 8. Artificial intelligence and applications to geoscience data (AI) 9. Underground Thermal Energy Storage (UTES) in Ireland (Hs) 10. Bedrock and /or Quaternary geology of Ireland (Mp)
Expected project outputs	See Terms and conditions for expected outputs and impacts. Eligible projects must undertake research or technological development in a geoscience context relevant to national or international policy and/or regulation.



Appendix 2: Financial rules from Department of Public Expenditure and Reform

<https://www.gov.ie/en/circular/10b42-circular-132014-management-of-and-accountability-for-grants-from-exchequer-funds/>



Statement of Principles for Grantees

Are you in receipt of public funding?

This Statement outlines the 4 principles which apply in the case of bodies in receipt of grant funding provided directly or indirectly from Exchequer sources.

Clarity

Governance

Value for
Money

Fairness



*This Statement should be brought to the attention of every grant receiving body
If you are in receipt of Public Funding you should*

Clarity Understand the purpose and conditions of the funding and the outputs required Apply funding only for the business purposes for which they were provided Apply for funding drawdown only when required for business purposes Seek clarification from the grantor where necessary – on use of funds, governance and accountability arrangements.	Governance <i>Ensure appropriate governance arrangements are in place for:</i> oversight and administration of funding control and safeguarding of funds from misuse, misappropriation and fraud accounting records which can provide, at any time, reliable financial information on the purpose, application and balance remaining of the public funding accounting for the amount and source of the funding, its application and outputs/outcomes.
Value for Money <i>Be in a position to provide evidence on</i> effective use of funds value achieved in the application of funds avoidance of waste and extravagance	Fairness Manage public funds with the highest degree of honesty and integrity Act in a manner which complies with relevant laws and obligations (e.g. tax, minimum wages) Procure goods and services in a fair and transparent manner Act fairly, responsibly and openly in your dealings with your Grantor



Appendix 3: Example Application Form



Rialtas na hÉireann
Government of Ireland



Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

**Research Programme
- Targeted Projects Call 2023 -
- Application Form -**

Lead Applicant Name	
Lead Applicant Title (Mr, Ms, Dr...)	
Email	
Phone number	

Organisation name	
Organisation type:	☐ HEI ☐ Private Sector
Company Registration No. (if applicable)	
Department/section	
Address	

Targeted Project Title (not editable)	Choose an item.
Open Project Title	(add Open Topic project title here)
Total financial support requested from GSI	€

Declaration

I declare that the information provided is accurate and correct. I agree that the Geological Survey Ireland Research Programme management may make any enquires it considers necessary to verify the information provided herein. I have read, and agree to, the Geological Survey Ireland Research Programme (Targeted Projects Call) Terms and Conditions.

Signature of Lead Applicant: _____ Date: _____

Approval of Authorised person: _____
(for HEIs, Research Office stamp)

1. Partner information – *please copy table as needed:*

Co-applicant name	
Role in the project	
Organisation name	
Organisation type: Sector	☐ HEI ☐ Public Sector (other) ☐ Private
Company Registration No. (if applicable)	
Department/section	
Address	

2. Project information:

Topic	Choose an item.			
Open Project Title	(add Open Topic project title here)			
Keywords (max 10 words)				
Duration (max 24 months)				
Theme (for Open Topic only)	☐ 1.Cl	☐ 2.GW	☐ 3.Gc	☐ 4.Gp
(select max 2 - see Terms & Conditions for details)	☐ 5.Gz	☐ 6.DB	☐ 7.Me	☐ 8.AI
	☐ 9.Hs	☐ 10.Mp		

Abstract/short description (*max 200 words*):

Abstract/short description (max 200 words):

Project Description (max 4000 words, excluding figures and headings):

- (i) Strategic context and rationale (*see terms and conditions*)
- (ii) Objectives and scientific/engineering targets beyond the state of the art (*If this project is an extension of existing/ongoing research, this section must clearly define only the additional work to be delivered by the new project*)

(iii) Implementation (including timelines and a Gantt Chart, milestones, management plan, risk mitigation plan, data management plan)

(iv) Outputs (please provide a short description including communication and dissemination activities and complete the table below)

3. Project Deliverables/Outputs

Del No.	Deliverable description	Expected delivery date
D1	e.g.: Beta version of modelling software	e.g.: month 9
D2	e.g.: Database	e.g.: month 12

(Add rows as needed)

Impact of the project (*max 1000 words, include links between deliverables/outputs and impact, see Terms and Conditions*):

References:

4. Project Budget (*double click on table below to activate*. Maximum GSI contribution is €200,000 for Topics 1-6 and €100,000 for an Open Topic project. Indirect costs cannot exceed 15% of the total direct costs, excluding subcontracting and ESRL. ESRL costs, if applicable, should be included as both an expenditure item and as ESRL in-kind. Sub-contracting costs cannot exceed 10% of the total direct costs).

Item	Cost €	
Personnel costs	0	
Student fees	0	
Consumables	0	
Travel (incl. Fieldwork)	0	
Other (publishing costs)	0	
Subcontracting (max 10% of direct costs)	0	
ESRL access/analysis (approx.)	0	
Indirect costs (max 15% of direct costs excl. subcontract)	0	
Total Project Budget	0	
Contribution (cash & in-kind), if applicable	0	
ESRL access in-kind (approx.)	0	
Total requested from GSI	0	

Budget justification (*each expenditure line from the table above should be justified*):

Ethics and gender considerations

Ethics – all relevant ethical implications have been considered and will be addressed within the organisation. Please refer to the Institute of Geologists of Ireland Code of Ethics	☐ yes
Gender – due consideration has been given to gender balance within the proposed research team. Please refer to the following as appropriate for your organisation - HEA National Review of Gender Equality in Irish Higher Education Institutions or - Gender Equality in Ireland	☐ yes

I confirm that the project described is not funded by other sources	Yes ☐
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Appendices:

Please attach the following documents:

- CV of Lead Applicant (max 4 pages). Evidence of formal career breaks, if applicable, (e.g., parental leave) can be included in addition to the 2 page cv
- CV(s) of co-applicants if applicable (max 2 pages)
- Letter(s) of support for any partner providing in-kind or cash contributions.
- Applications requesting access to the ESRL must include a letter of support from the lab Director. Applicants requesting access to the GSI National Archive must include a letter of support from GSI.