Global Risk Modelling Alliance

Global Risk Modelling Alliance Programme (GRMA)

Selection criteria for providers of data and risk model solutions

Definition: Throughout this document, the term 'Providers' refers to any organization, public, private or academic capable of providing risk-related data and models relevant to the Call for Proposal generated by the Global Risk Modelling Alliance and InsuResilience Solutions Fund. Providers originating in the relevant partner country are encouraged to apply, either directly or through international partners in consortia.

With the frequency and intensity of climate related disasters expected to increase over the next decades countries need to prepare, mitigate, and manage risks more actively to limit the impact of climate change on their population and economic development. Being over-proportionately affected by climate and disaster risks this is especially true for poor and vulnerable countries, which are least prepared and often lack the necessary information and risk understanding as a prerequisite for climate and disaster risk management, encompassing risk prevention, preparedness, reduction and transfer, and the development of comprehensive climate and disaster adaptation and risk management strategies. This lack of risk understanding is reflected in the **limited access to and ability to use risk analytics**, and a **lack of knowledge exchange**.

In order to foster climate risk understanding as a prerequisite for comprehensive climate and disaster risk management of countries most affected by climate change, additional support for climate risk modelling and analytics is offered by the **Global Risk Modelling Alliance Programme (GRMA)**, hosted by the InsuResilience Solutions Fund (ISF). The GRMA supports access to risk analytics resources and the development of local expertise on climate and disaster risk modelling in poor and vulnerable countries. Taking a public-private-partnership approach (PPP), the GRMA leverages expertise and know-how of the private sector as well as public sector research and academia in climate and disaster risk modelling and analytics.

The GRMA provides financial and technical assistance to support detailed climate and disaster risk analysis, fostering climate risk understanding (outcome) as a prerequisite for comprehensive sovereign climate and disaster risk management.

The financial and technical support provided under the GRMA serves to:

- Enhance local capacities and expertise of climate risks analysis in poor and vulnerable countries. (Output 1)
- Provide access to existing and new data needed to develop/validate climate risk models, including exposure and vulnerability data, adapted to the local needs and context. (Output 2)

- Increase the availability of quality assured data and models to poor and vulnerable countries as a public good based on global standards provided on open-source modelling and data platform linking existing as well as incorporating new local models and data allowing intertemporal and cross-geographical validation. (Output 3)

The Technical Committee of the ISF will take the ultimate decision on the selection of providers for the requested modelling and data support to the respective country under the GRMA based on the principles outlined in this document. The Technical Committee´s decision will be based on:

- Assessment of proposals submitted by providers in response to a Call for Proposals or Request for offers by the GRMA team.
- Recommendations made by the GRMA Strategic Advisory Board.

The assessment of the proposals shall be based on the minimum criteria, i.e. necessary preconditions to be fulfilled for enhancing local capabilities for climate and disaster risk analysis. Criteria that MUST be fulfilled include:

- Minimum Criteria shown in Table 1 below.
- Criteria for hazard models (Table 2A) and Technical Expertise (Table 2C).
- Financial criteria outlined in Table 3.

I. Minimum Criteria

Necessary pre-conditions to be fulfilled by providers of data and risk models under the GRMA climate risk studies.

Criterion	Fulfilled
The providers of data and risk models/partners have prior knowledge and capacities of the model development and running (implementation) of the relevant hazards for the region concerned (preferably including local knowledge and expertise) and have, in the past, contributed to studies including the relevant hazard(s). This should be demonstrated by at least 3 project references.	
The lead provider of data and risk models has at least an annual turnover of 600,000 EUR for the last three financial years. In case the providers of data and risk models represent exclusively local partners a lower minimum annual turnover might acceptable.	

2. Selection Criteria

Model & Data Quality and Technical Expertise.

Category	Model Criteria	Fulfilled
A. Data and Hazard model		
a) Use of local research	• Do the providers of data and risk models include research data from local organizations on hazard, vulnerability and exposure in the risk analysis?	
b) Quality of hazard and loss data	• Is the historical hazard data publicly accessible and available? • Has the model been validated and adjusted against historical loss data? Are the historical loss datasets available to view? • Is the temporal and spatial resolution of the dataset sufficient to characterize the hazard and loss when validated against historic data? Are there any gaps? • Disaggregation of demographic data (at least on gender and age) for the hazard, for the identification of the most at-risk groups.	
c) Quality and transparency of the hazard model	• Contains sufficient information (variables, dimensions, and spatial scale) to effectively characterise the hazard for application to risk analysis and comparison with historic data, e.g., flood hazard data would include representation of depth and extent, as a minimum, at a sufficient spatial resolution to provide good quality risk guidance. • Temporal resolution: Suitability for the risk question concerned, and whether a change in frequency attributed to climate change is included in the analysis. • Software readiness of the model: fit for use in client country's environment.	

• Metadata will comply with templates provided by GRMA during the project, to fully describe the contents of provided datasets, such that they are machine- and human-readable to be easily found and understood by others. Specifically, metadata will comply with international open standards for Geographic Information metadata (ISO19115-2: 2019) with additional risk-specific fields compliant with the Risk Data Library (RDL) Standard originating from World Bank GFDRR. • Quality of User Documentation. Each item to be assessed as 'Missing', 'Limited' or 'Comprehensive': a. Scientific description of the methodology. b. Report on validation. c. User guide, including regular updates. d. Operations Concept. e. Data assessment results. • Uncertainty Characterization and confidence level by means of probabilistic and/or event set based models.	
d) Compatibility and interoperability of risk model and data • Risk models – Models are to be formatted for use and continuous development (by GRMA grantee) on the open-source formats. For financial risk transfer applications, industry accepted platforms such as the Oasis Loss Modelling Framework is preferred, but this does not exclude use of other platforms where relevant, such as GEM OQ, CLIMADA, CAPRA, DAFNI, CatSIM and others. The intention is that users can choose their primary interface and also would be able to take advantages of model variety, community, financial capability and practical tools for local integration such as model development kits. • Exposure data to be appropriate in geographic scale and taxonomy for the risk question concerned. *Exposure data is to be made available in the Open Exposure Data (OED) format, or if not, a case is to be made by the provider for use of a similarly open exposure data standard.*	
e) Transparency and sustainability of intellectual property (IP). • Provision of clear distinction between background and foreground IP. • Background IP describes IP generated outside the GRMA project (underlying data, code and methodologies generated outside the project being considered).	

• Foreground IP describes data, code or methodologies generated within the project for the specific geographical area and risk question being asked. Foreground IP generated through GRMA should be ultimately transferred and owned by local public partner/government. Information of usability of foreground IP without background IP needs to be provided.	
Category **Technical Expertise**	**Fulfilled**
B. Quality of Submission	
• Are the concept and aims clearly defined? Do they reflect completeness, causality, and comprehensibility in the context of the Call for Proposals? • Are the work plan and timelines achievable and set realistic and achievable goals?	
C. Existing Expertise and Technical Capabilities	
• Technical expertise and experience working on relevant exposure(s), impacts, and hazard(s). • Previous experience working in the relevant region/ country. • Previous experience in climate and disaster risk assessment and modelling? • Knowledge on quantification of climate and disaster risks for fiscal budget management? • Knowledge on quantification of climate and disaster risks for operational transactions (e.g., resilient investment or risk transfer instruments). • Ability to conduct scenario analysis / stress testing.	
D. Providers of Data and Risk Models/Partners	
• Do the providers of data and risk models/partners add relevant expertise efficiently and effectively? Considerations include: a. No overlaps in proposed work. b. Complementarity of expertise. c. Level of innovation and new research. d. Familiarity of local partners with the public sector use case.	

• Have the partners previously worked in project consortia? • Does the workplan and presentation of the workplan clearly define the objectives, ambition, and leads towards smooth cooperation and clear roles and responsibilities across all partners? • Do the providers of data and risk models understand the context of co-development of the project with local authorities, and do they support a 'learn by doing' approach? • Do the providers of data and risk models propose a solution which matches the potential capability of the public sector use case? Model/data solutions are unlikely to be selected if: a. They are overly complex for the data context. b. They imply unreasonable expectations of user skill levels.	
E. Knowledge Transfer Capabilities	
• Experience in providing climate risk analysis training and related concepts to related stakeholders? • Experience in training on fundamentals of risk modelling, specific tools, online guidelines, and seminars. • Capacity building either by means of consultancy etc. with country partners on setting up a sustainable geospatial repository for users to access and share data collected and produced?	

3. Selection Criteria on Financial Assessment

Category	Financial Criteria	Fulfilled
A. Data and Hazard Model		
• Adequacy of cost estimates (compliance with usual market costs / rates). • Cost effectiveness with respect to envisioned outcomes (target group / local conditions / complexity).		