

Request for Proposal

Date: 23 January 2025

Hiring an Organization for the Development of the Second Iteration of the Global Infrastructure Risk Model and Resilience Index (GIRI)

1. Background

The Coalition for Disaster Resilient Infrastructure (CDRI) is a multi-stakeholder global partnership of national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and academic and knowledge institutions. It aims to address the challenges of building resilience into infrastructure systems and the development associated with it. The vision, mission, goal, and objectives of CDRI are explicitly linked to the post-2015 development agendas.

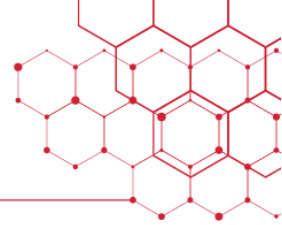
CDRI launched its inaugural Biennial Report on Global Infrastructure Resilience: Capturing the Resilience Dividend in October 2023. The Biennial Report is CDRI's principal vehicle for engaging and focusing the attention of a global audience of political leaders, policymakers, practitioners, and researchers on the critical and multifaceted challenges posed by disasters and climate change on infrastructure assets, systems, and services. The Report builds the evidence for prioritizing investments to bolster infrastructure resilience globally, particularly by aiding Coalition members through knowledge sharing, capacity building, and exchange of best practices. Moving forward, CDRI aims to publish the Second Biennial Report by 2025. The Second Biennial Report will leverage the key findings and lessons from the inaugural edition to strengthen the analysis further and address some of the questions posed by the Report towards capturing the resilience dividend.

2. The First CDRI Biennial Report

The first edition of the Biennial Report is a significant milestone in CDRI's ongoing effort to advance disaster and climate-resilient infrastructure globally. The report addresses the unique challenges Low-and-Middle Income Countries (LMICs) face. It outlines pathways for global resilience improvement, leveraging data from the first-ever fully probabilistic global risk assessment of infrastructure assets, known as the Global Infrastructure Risk Model & Resilience Index (GIRI).

GIRI assesses the risk and resilience across nine major critical infrastructure assets covering seven hazards at a global level to arrive at financial metrics that instigate countries to formulate policies, plans, and strategies that incorporate resilience. Further, through rigorous data, evidence, and outputs, the report underscores the idea of the "resilience dividend" that can support countries in transforming the perception of resilience from a cost to an opportunity, fostering financial incentives for resilience investments that benefit governments, investors, and communities alike.

Apart from GIRI, the first Report also outlines four critical dimensions for enhancing infrastructure resilience and capturing the resilience dividend, starting with improving infrastructure governance that involves enhanced planning, design standards, codes, regulations, compliance with Operations and Maintenance, and best practices exchange to ensure the reliability and quality of infrastructure. The third dimension is investing in resilience through attracting untapped private institutional capital (US\$ 106 trillion worldwide) and innovative financial mechanisms. The report also highlights the need for knowledge sharing and capacity building on infrastructure resilience. Lastly, it explores the innovative use of nature-based infrastructure solutions to integrate natural systems in infrastructure design and operation strategies.



The report along with its executive summary is available for download at: cdri.world/gir. The GIRI data platform is also an integral part of the Biennial Report and makes available the data from the GIRI model for visualization, interpretation, and analysis. It can be accessed at: cdri.world/giri.

3. The Second CDRI Biennial Report

The Second CDRI Biennial Report builds on the comprehensive risk assessment methodology with global applicability developed for the first report. The Second Report aims to answer some of the questions raised during the preparation and dissemination of the first Report, expanding its remit and strengthening the connections between the risk analysis and the financial, institutional, and technological dimensions of resilient infrastructure. CDRI intends to have strong linkages between the various lines of work of the Second Report and the rest of the organization to ensure that the latest practical results and field experiences of CDRI teams are reflected in the Biennial Report and, vice versa, the methodologies and frontier thinking of the Report is incorporated in the work program of the Coalition.

The Second CDRI Biennial Report is organized along two main pillars. The first pillar is based on a series of modelling and analytical pieces that deepen, downscale, and project the results of the first Biennial Report into the future. The second pillar advances the work of the first Biennial Report from the “what” to the “how.”

I. Pillar 1: Deepening, Downscaling, Projecting

The Second CDRI Biennial Report expands the work of the first report along three lines of work:

Deepening the understanding of resilient infrastructure by (i) incorporating additional risks and updating the model with new databases¹; (ii) undertaking specific assessments of economic and poverty impacts due to infrastructure services failures caused by disasters, including a perspective on small and community infrastructure; and (iii) completing global surveys to understand better the underlying factors of insufficient resilience and the impacts on businesses and the economy.

Downscaling the global analysis undertaken for the first Biennial Report to the country and sub-national level to provide higher-quality risk assessments using better data and understanding of local conditions through national partners. At the same time, these analyses will review options, costs, and benefits of resilience and adaptation measures to reduce the impacts of disasters on infrastructure assets, systems, and services.

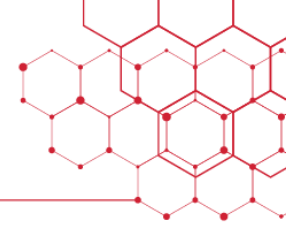
Projecting the modelling exercise to incorporate future expected trends, including investment trajectories to achieve the infrastructure-related Sustainable Development Goals (SDG) targets (with special attention to the vulnerabilities of last mile infrastructure services), the projected growth of urban centres, and related areas of analysis.

The following sections describe the specific research and analysis questions that will be explored in the second Biennial Report. The questions that can be answered with existing data and reasonable levels of accuracy will be included in the second Biennial Report.

II. Pillar 2: How to Capture the Resilience Dividend

The first Biennial Report provided a robust analysis of the magnitude of the “resilience dividend” at the global and national levels. It also took the first steps in analysing ways to build and maintain more resilient and climate-adapted infrastructure, including nature-based solutions and financial

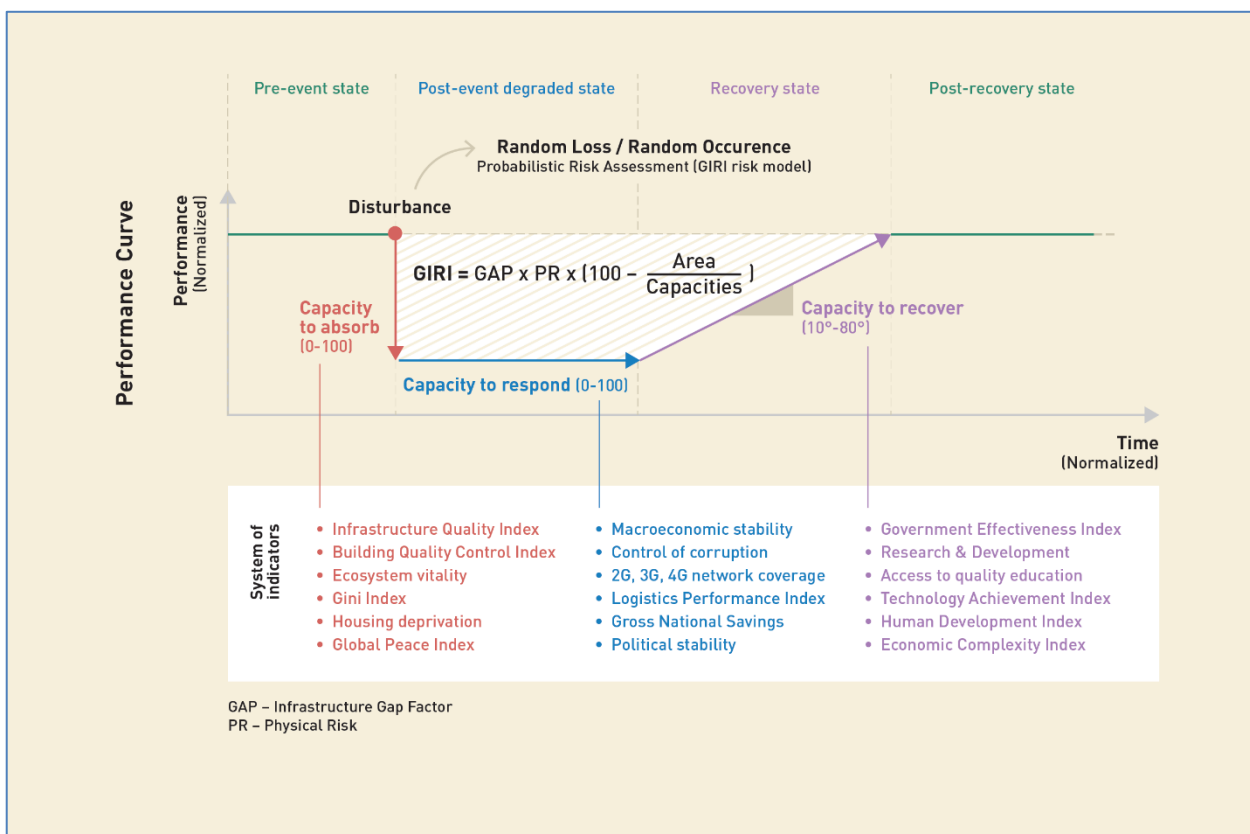
¹ The downscaling work will continuously look at opportunities to validate the model results against actual damage data at the regional or country level and emphasize the need for countries to strengthen their data collection and post-disaster forensic analysis for later use in improving the probabilistic risk assessment model.



mechanisms. The Second Biennial Report will build on the foundation of the first report. It intends to move from the question of “What is the magnitude of the potential resilience dividend?” to “How can this resilience dividend be captured?”

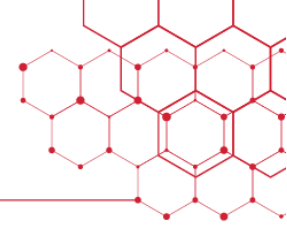
Under this Pillar, the Second Biennial Report will review (i) financial instruments for resilience and adaptation, (ii) institutional, governance, and capacity frameworks, and (iii) frontier tools, including disruptive technologies and nature-based solutions, among others.

The report will present frameworks for each work area, building on the best approaches developed by other organizations, documenting good practices, and creating roadmaps for action. The “how to” discussions in Pillar 2 will be structured around and closely linked to the framework used in the first Biennial Report, which is based on countries' capacities to absorb a disturbance to the infrastructure asset caused by a disaster, respond to the disaster, and recover to the original performance (or even to build back better).



These capacities depend on various capacities, mechanisms, institutions, regulations, and overall governance of the infrastructure systems and services. Pillar 2 will explore how to strengthen each of these capacities through enhanced financial mechanisms, institutional, governance, and capacity characteristics, as well as innovative solutions. Pillars 1 and 2 of the Report are closely connected in practice, as the modelling results and insights developed in Pillar 1 are indispensable to define roadmaps for action to capture the resilience dividend as analysed in Pillar 2.

Finance: Pillar 2 of the Second Biennial Report will present practical approaches to financing infrastructure assets and systems with greater capacity to absorb disturbances caused by disasters. These include financing more resilient and better climate-adapted infrastructure and proactive disaster-focused enhanced maintenance of the assets. The report will also review



experiences and best practices with financial mechanisms allowing faster and more efficient post-disaster response and recovery. These include insurance, credit lines, catastrophic bonds, and other tools. The financing of maintenance, aging infrastructure upgrades, and nature-based solutions, among others, will be explored. The institutional arrangements, capacities, and roadmaps to develop and continuously improve these financial mechanisms will also be discussed, including the role of significant stakeholders such as the financial regulators and the insurance sector. Business models to mobilize private capital for resilient infrastructure will be explored. Finally, the analysis will explore ways to quantify and monetize the resilience dividend across public and private stakeholders.

Institutions and governance: The capacities to absorb, respond, and recover depend on the institutions, governance arrangements, and capacities of government agencies, infrastructure users, and the infrastructure construction, maintenance, and operations ecosystem (with its many public and private stakeholders and sometimes uncoordinated and overlapping responsibilities). The differential capacities of the national and local governments will be part of the analysis, as well as the diverse governance mechanisms and systems for resilient infrastructure². Pillar 2 of the Report will review the best approaches and frameworks of analysis, present good practices worldwide, and propose roadmaps to strengthen institutions and governance for resilient infrastructure. The institutions and stakeholders to be analysed are not limited to the infrastructure agencies but will encompass many other related government agencies, the private sector (from designers to contractors, construction supervisors, and operators), and users.

Tools and technologies: The Second Biennial Report will conduct a deep dive into new tools and technologies currently under development, testing, and initial stages of scaling up. The analysis will go beyond listing these tools and technologies and focus on the “how to” identify, prioritize, select, finance, implement, and upgrade these tools and technologies. Pillar 2 will focus on disruptive and information technologies for resilience (from artificial intelligence to remote sensing, advanced sensors and materials, machine learning, and cybersecurity) and nature-based solutions. The review will take a cautious approach to applying these technologies in countries with diverse capacities and avoid the perception that new tools and technologies alone can help governments and users capture the resilience dividend. Furthermore, the Report will have a balanced analysis to illustrate the need to combine NBS with gray infrastructure and the difficult trade-offs involved in design and implementation³.

Each of these work areas will develop:

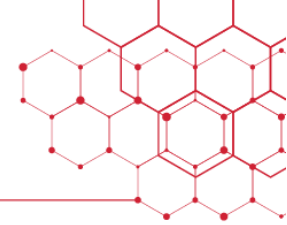
- Approaches for governments to continuously scan the horizon, understand, and leverage new technologies
- Tools to work with the private sector to develop, test, and scale up use of disruptive technologies to enhance the resilience of infrastructure assets and networks
- Global examples and good practices of technologies to capture the resilience dividend

4. First Iteration of GIRI

1. GIRI helps in identifying and estimating the risk associated with major geological and climate-related hazards (Earthquake, Tsunami, Landslide, Flood, Tropical Cyclone and Drought)

² Procurement was highlighted as a critical area of analysis for the institutions and governance workstream of the Report in the consultations.

³ This analysis will consider local conditions and will highlight the need to bring together solid engineering, ecological, and cost-benefit analyses.



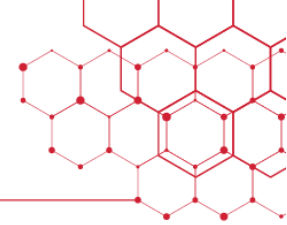
across critical infrastructure sectors (Power, Telecommunications, Roads and Railways, Water and Wastewater, Ports and Airports, Oil and gas, Buildings, Education and Health) for all countries and territories in the world and considering climate change.

2. Its purpose is to improve the understanding and make the global landscape of infrastructure risk and resilience visible. In doing so, GIRI provides a globally comparable set of financial risk metrics such as the Average Annual Loss (AAL) and Probable Maximum Loss (PML) for infrastructure assets.
3. GIRI can assist in the identification of the contingent liabilities internalized in each infrastructure sector and the implications for social and economic development in the context of climate change. It can, thus, provide the basis for developing national resilience policies, strategies and plans, resilience standards, and for correctly integrating disaster and climate risk into investment decisions.
4. The Model estimates financial risk metrics such as the AAL, estimating the contingent liabilities associated with infrastructure assets in each sector and geography, with respect to each hazard. The Index integrates the financial risk metrics from the Model with three different sets of indicators that represent the capacity of a country to resist and absorb, respond, and restore or recover from hazard events. Additionally, the Index considers the infrastructure gap, defined as the difference between the infrastructure required to meet the SDGs and the existing infrastructure.

As part of the scope of work for the first iteration of GIRI, the following was included:

Pillar 1: 7 components

- **Component 1: Global infrastructure exposure model**
A geographically referenced exposure model that provides information on the value of exposed infrastructure assets in the power and energy, telecommunications, and transport sectors for each country and territory of the world
- **Component 2: Vulnerability Functions**
A set of vulnerability functions for each infrastructure class and where appropriate for each region that can be used to calculate the probable economic loss for different levels of hazard intensity.
- **Component 3: Update of the GAR buildings exposure model**
An updated buildings exposure model, that provides information on the economic value of the built environment, including social infrastructure in the health and education sectors and local infrastructure systems, for each country and territory of the world.
- **Component 4: Landslide Hazard Model**
A fully probabilistic landslide hazard model, that enables the generation of a complete set of stochastic scenarios of landslide hazard events of different intensities, for each country and territory of the world, considering climate change.
- **Component 5: Flood and hydrological drought hazard model**
A fully probabilistic flood and hydrological drought hazard model, that enables the generation of a complete set of stochastic scenarios of flood and hydrological drought hazard events of different intensities, for each country and territory of the world, considering climate change.
- **Component 6: Tropical cyclone hazard model**
A fully probabilistic tropical cyclone hazard model, that enables the generation of a complete set of stochastic scenarios of tropical cyclone hazard events of different intensities, for each country and territory of the world, considering climate change.



- **Component 7: Multi-hazard Risk Modelling**

All the risk calculations are derived from the hazard, exposure, and vulnerability models constructed in all other Pillar 1 components. A complete set of hazard-specific and multi-hazard risk metrics, including Loss Exceedance Curves, Average Annual Loss (AAL), and Probable Maximum Loss, (PML), considering climate change, and for each county or territory in the world.

Pillar 2: 2 Components

- **Component 1: Global Infrastructure Risk Model and Resilience Index**

A set of indexes that combine probabilistic risk metrics with economic and social metrics, to provide information on the implications of disaster and climate risk in different infrastructure sectors on sustainable development.

- **Component 2: GIRI Data Platform**

A fully operative data platform that allows remote users to visualize, query, download, and analyse the risk information produced for the GIRI.

5. Scope of work for the Second Iteration of GIRI

CDRI aims to hire an organization (**consortiums are allowed**) to develop the second iteration of the Global Infrastructure Risk Model and Resilience Index (GIRI 2.0). The organization will be responsible for a variety of tasks building on the GIRI methodology developed for the First Biennial Report, working under the supervision of the Coordinating Lead Author to the Report and in close coordination with the CDRI Project Team. This work will comprise of three components, as described in Section 3 of this RFP:

- Deepening
- Downscaling
- Projecting

Under these three components, the scope of work will include:

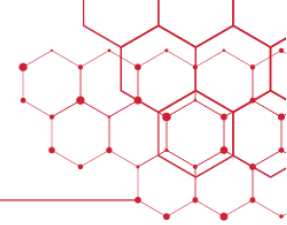
5.1 Deepening

5.1.1 Updating and addition of new hazard models

- Update of the **earthquake and tsunami hazard models** used in GIRI, considering the availability of the most recent peer-reviewed data models and methodologies. The organization should also propose other updates based on recently available upgrades of data or methodologies available since the first Biennial Report. The models are expected to have a similar database structure and metadata and use the same resolution as in the first iteration of the GIRI. The organization may like to propose additional updates to the hazard models.
- Development of new hazard models for additional hazards with significant direct or indirect impacts on infrastructure, including heatwaves, cold waves, or forest fires/wildfires, plus others that the organization proposes based on feasibility and significance considerations. As needed, the development of these new hazard models may require the updating of relevant data (temperature, rainfall, land coverage, etc.) collected for the first iteration of GIRI and the organization will propose which updates are recommended.

5.1.2 Update and expand exposure models

- Identify new or updated exposure datasets on all infrastructure sectors, that have been published after the first iteration of GIRI and update the asset base exposure models as appropriate.



- ii. Recalculate exposure of buildings and local infrastructure networks (that was calculated based on population density) taking advantage of recently released new data sets, for example by the Joint Research Centre (JRC) and others.
- iii. Propose, based on the data available, the possible development of an exposure model for irrigation infrastructure (including dams, irrigation channels, borewells, tanks reservoirs, etc.) to integrate into the GIRI model.

The organization may offer in its technical proposal other updates and expansion of exposure models that can be cost-effectively added to the GIRI model. These additions will be considered an integral part of the technical evaluation.

5.1.3 Update and expand vulnerability functions

- i. Update vulnerability functions developed for the first iteration of GIRI and where appropriate calibrate or further develop.
- ii. Develop new vulnerability functions for buildings and infrastructure exposed to extreme heat, extreme cold, or forest/wild fires, and other new hazard models included in GIRI 2.0.

5.1.4 Risk modelling and estimation

- i. Undertake additional calibration of the GIRI model by comparing historical losses associated with major hazard events against modelled losses in a few selected countries. If necessary, adjust and calibrate vulnerability functions in those countries where the modelled losses have significant and unexplained variances from the historical losses.
- ii. As required, rerun the GIRI risk estimation for all infrastructure sectors, hazards, countries, and territories, based on the new or updated hazard models, exposure models, and vulnerability functions described above.

5.2 Downscaling

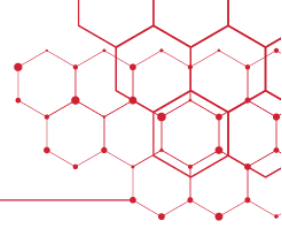
Three CDRI member countries have shown interest and commitment to undertake risk modelling using the GIRI model at the national or sub-national scale (two states in Brazil, Chile, and Fiji at the national level). In two cases (Chile and Fiji), the underlying data appears to be of high quality and the organization will downscale the GIRI model at the country level. In Brazil, the organization should subcontract a local institution that will lead the compilation of data and running of the GIRI model under the organization's supervision. Individual reports will be prepared for each of the cases described above. A background note describing the challenges of downscaling the GIRI model to the national and sub-national level, and recommendations to replicate this exercise to other CDRI Coalition members will be prepared.

Additionally, 4 other countries are to be selected for the downscaling exercise, along with an engagement approach, in consultation with CDRI. The organization should, in its budget, include the cost of conducting four downscaling exercises for two medium-sized countries and two small-sized countries to be identified early during the implementation of this contract.

5.3 Projecting

The First Iteration of the GIRI model used current datasets of existing infrastructure assets. However, in many developing countries the infrastructure gap is enormous. This gap will be progressively closed as countries' economies develop.

The objective of this task is to develop reasonable projections of infrastructure growth and apply the GIRI model to estimate risk to future exposure but with the existing vulnerability functions. The objective of this exercise would be to calculate the increase in key indicators such as the annual average losses, maximum annual loss, and others if countries do not change their



resilience practices in infrastructure sectors.

The proposed projections are to be conducted for a sample of developing countries with diverse characteristics:

- Infrastructure asset base expansion to achieve the 2030 SDG targets related to infrastructure
- Projected urban growth (and the necessary urban infrastructure expansion associated with this growth)

The organization, in its proposal, may suggest other projections that can be developed with reasonable methodologies based on existing literature on the subject and that can achieve the objective of this analysis.

A second analysis under this task will be to complete another run of the GIRI model with the projected infrastructure base but with enhanced resilience levels in the countries (for example, assuming that the next level of higher-income countries has higher resilience and reduced vulnerability). These two runs can then allow a comparison of the potential dividend if countries enhance their resilience practices in infrastructure.

6. Other tasks

6.1 Data platform

Integrate all the new information produced, including risk metrics and data layers on the updated GIRI data platform, using similar structure, metadata, resolution, and other indicators. This process will require close collaboration with UNEP-GRID, which has been commissioned by CDRI to manage the GIRI Hosting and Maintenance contract until the end of 2026.

6.2 Background Reports and Biennial Report Chapter(s)

Prepare a report integrating the results of the tasks described above, and a summary chapter (or chapters, as agreed with the CDRI team) for the Biennial Report.

6.3 Peer review

The organization will work with an advisory group of prominent technical experts in risk modelling and infrastructure. The organization will prepare briefing materials, make presentations, and engage in discussions with the advisory group throughout the consulting assignment.

6.4 Dissemination

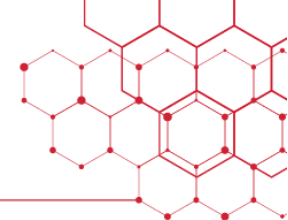
The organization will prepare dissemination materials and participate in the dissemination activities of the Biennial Report during its launch phase.

6.5 Engagement with other workstreams

The organizations/ consultants working on the other workstreams of the Biennial Report (finance, institutions, governance, technologies, NbS, and surveys) may need engagement and inputs from the GIRI modelling. The organization will support these interactions and provide advice to the other consulting teams in areas such as (i) mechanisms to fund the collection of data and development of GIRI-like models at the national level for planning and finance purposes; (ii) institutional and governance approaches to handle the data collection and risk modelling at the national and sub-national level/agency levels; (iii) ways in which new technologies can aid in data collection and risk modelling; among others.

7. Timeframe

The timeframe for the delivery of project outputs is 15 months, **with key deliverables, including**



the final chapters of the report on topics agreed with CDRI, due by October 2025. Additional activities will be delivered within 15 months after the contract signing.

For specific deadlines for each deliverable, please refer to Section 8, "Schedule of Deliverables."

A detailed work plan and schedule of deliverables must be included as part of the Technical Proposal.

8. Schedule of Deliverables

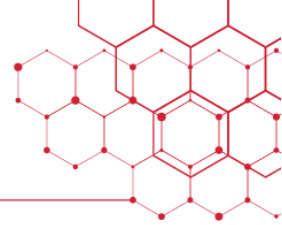
The following deliverables should be submitted while conducting the assignment.

| S.N. | Deliverable | Deadline | Details |
|------|--|---|---|
| 1 | Inception Report | 4 weeks after contract award | Submit a detailed work plan (activities, timing, methodology, sources) for approval by the Coordinating Lead Author and CDRI Biennial Team. The deadlines for each task will be finalized in the work plan based on discussion and approval of the CDRI team. |
| 2 | Monthly Progress Reports | Ongoing, each month | Include achievements, challenges, delays (with justification), updated Gantt chart, and proposed modifications to the work plan and deliverables. |
| 3 | Biennial Report Chapters | Various deadlines (see below) | Submit chapters based on task categories. |
| | - Deepening and Projecting Tasks | 5 months after contract award | |
| | - Downscaling Tasks | 6 months (Chile/Fiji), 15 months (Brazil + 4 additional countries selected in consultation with CDRI). | |
| | - Data Platform Update | 9-15 months after contract award | |
| | - Dissemination Tasks | 9-15 months after contract award | |
| 4 | Peer Review | Throughout the contract period on dates finalized as per the work plan submitted as part of the Inception report. | Continuous feedback from the Technical Advisory Group, integrated into reports and other workstreams. |
| 5 | Final Report and Other Deliverables | 15 months after contract award | |

The organization will deliver the above individual deliverables, including annotated outline, draft, and final versions. CDRI will be responsible for the copyediting, design, and printing.

In addition to the above deliverables, the organization will provide periodic work progress updates to the Coordinating Lead Author and CDRI Team at a mutually agreed frequency.

All data (including but not limited to base data used, simulation results, and final map layers)



should be shared with CDRI in an open data format along with appropriate metadata and technical documents detailing the approach and methodology. All the deliverables should be submitted by the selected institution in soft copy (in addition to hard copies).

9. Reporting

The organization will work in close coordination with the Coordinating Lead Author for the Report and report to the Director (RKM&CD) and Lead Specialist – Biennial Report providing regular updates on progress, challenges, and key decisions.

10. Key Competencies

Towards describing the expertise of the bidder, the proposal should clearly highlight the following:

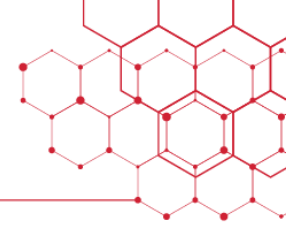
- The year and state/country of incorporation and a brief description of the bidder's present activities.
- Experience in developing exposure models, hazard models, and multi-hazard risk models and in developing and using financial risk metrics.
- National and international experience including working with international networks and organizations.
- Experience in similar and relevant projects and previous relevant UN projects / similar or equivalent organizations (evidenced by sharing the experience of working on similar projects).
- Familiarity with internationally used concepts, tools, and practices in conducting multi-hazard risk assessment.

11. Clarifications by Bidders

- Bidders requiring any clarification on the RFP document may contact the Procurement division of CDRI in writing as per the format attached at '**Annexure-I**' by email to tender.projects@cdri.world
- CDRI shall endeavor to respond to the queries raised or clarifications sought by the bidders. However, CDRI reserves the right not to respond to any query or provide any clarification, in its sole discretion, and nothing in this clause shall be construed, taken, or read as compelling or requiring CDRI to respond to any query or to provide any clarification.
- At any time prior to the proposal due date, CDRI may, for any reason, whether at its own initiative or in response to clarifications requested by the bidder(s), modify the RFP document by way of issue of Addendum/ Corrigendum/ Clarifications. Any Addendum/ Corrigendum/ Clarifications thus issued shall be shared with all bidders by email and/or uploaded on the website of CDRI (<https://app.cdri.world/tender/>) and shall be binding on bidders and shall form part of the RFP document.

12. Pre-Proposal/ Pre-Bid Meeting

- To clarify and discuss issues with respect to the project and the RFP Document, a pre-proposal meeting will be held on **6 February 2025 from 8:00 p.m. (IST)** through Video Conferencing (VC). The details of the VC would be shared nearer the time of the VC with the bidders that inform CDRI regarding their interest to participate by writing an email to tender.projects@cdri.world at least 2 working days in advance of the pre-proposal meeting.
- Prior to the pre-proposal meeting, the bidders may submit a list of queries and proposed



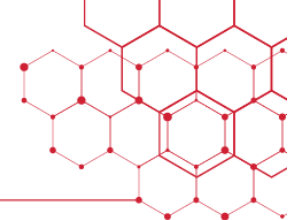
suggestions in the word format as per 'Annexure-I', if any, to the RFP requirements.

- Bidders may note that CDRI will not entertain any deviations to the RFP document at the time of submission of the Proposal or thereafter. The proposal to be submitted by the bidders will be unconditional and unqualified and the bidders will be deemed to have accepted the terms and conditions of the RFP document with all its contents. Any conditional proposal shall be regarded as non-responsive and would be liable for rejection.
- In case of any change in the schedule of the pre-proposal meeting, the same will be communicated to bidders through email and/or by posting on the CDRI website <https://app.cdri.world/tender/>
- Attendance of the bidders at the pre-proposal Meeting is not mandatory. CDRI will endeavor to respond to all queries received from all bidders, irrespective of the attendance of the bidder in the pre-proposal meeting.
- No interpretation, revision, or other communication from CDRI regarding this solicitation is valid unless in writing. CDRI may choose to send to all bidders whose proposals are under consideration, in writing or by any standard electronic means such as e-mail or by uploading on CDRI website of responses, including a description of the enquiry but without identifying its source to all the bidders.

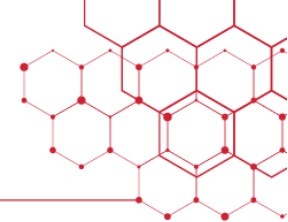
13. Evaluation

1. The organization will be selected following a **Quality Cum Cost Basis (QCBS)** of selection.
2. Proposals shall be evaluated as follows: **Evaluation Criteria for Technical Bids 100 points:**

| S. N. | Technical Evaluation Criteria | Total Points |
|----------|---|--------------|
| A | Bidder's qualification, capacity, and relevant experience | 30 |
| 1. | <p>Expertise and experience of the Service Provider in developing multi-hazard probabilistic risk models and resilience indices at the regional or global level.</p> <p><i>Minimum of 15 years of experience: 10 points</i></p> <p><i>for every additional two years of experience: 1 point each up to a maximum of 15 points</i></p> <p><u>Documents required:</u> Bidders are required to submit evidence (details/documents) in support of compliance with the above criteria</p> | 15 |
| 2. | <p>Completed/ ongoing Contracts in Multi-hazard Risk Modelling including Exposure Modelling.</p> <p><i>A minimum of one (1) contract of at least USD 200,000 value, completed in the last 5 years = 6 points</i></p> <p><i>For every additional contract = 2 points up to a maximum of 10 points.</i></p> <p><i>Documents required: Copies of relevant contracts/ work orders and completion certificate as proof of experience in the required areas.</i></p> | 10 |



| | | |
|--|---|------------|
| 3. | <p>Contracts at the global level, contracts at the national level, and contracts at the sub-national level on multi-hazard modelling for infrastructure sectors</p> <p><i>A minimum of one (1) contract of at least USD 50,000 value, completed in the last 5 years = 3 points</i></p> <p><i>For every additional contract = 1 point up to a maximum of 5 points.</i></p> <p><i>Documents required: Copies of relevant contracts/ work orders and completion certificate as proof of experience in the required areas.</i></p> | 5 |
| B | <p>Proposed Work Plan for each component including allocation of responsibilities. The Methodology and its responsiveness to the Terms of Reference shall be the primary evaluation criteria</p> | 50 |
| 1. | <p>Work allocation between Proposed Team based on their respective experiences and capacities.</p> <p><i>(The bidder will provide a detailed allocation of man days among the proposed team based on individual expertise and the attributable responsibilities for each component.)</i></p> <p>SCORING -</p> <p><i>Excellent: 10; Very Good: 7; Good: 5; Satisfactory: 3; Poor: 1; irrelevant: 0</i></p> | 10 |
| 2. | <p>Relevance and detailing of the Methodology and Work Plan</p> <p>SCORING -</p> <p><i>Excellent: 40; Very Good: 35; Good: 30; Satisfactory: 20; Poor: 10; irrelevant: 0</i></p> | 40 |
| C | <p>Qualification and experience of Proposed key personnel as specified in the Terms of Reference.</p> | 20 |
| 1. | <p>Risk Modelling Expert / Team Leader</p> <p>Minimum of 20 years of experience in the domain of risk modelling</p> | 4 |
| 2. | <p>GIS and Exposed Assets Expert</p> <p>Minimum of 15 years of international experience in the domain of GIS Modelling</p> | 4 |
| 3. | <p>Flood and Hydrological Drought Expert</p> <p>Minimum of 15 years of international experience in the domain of hydrology</p> | 4 |
| 4. | <p>Tropical Cyclone Expert</p> <p>Minimum of 15 years of international experience in cyclone risk management/ risk mitigation</p> | 4 |
| 5. | <p>Landslide Hazard Expert</p> <p>Minimum of 15 years of international experience in landslide risk management/risk mitigation</p> | 4 |
| Total points obtainable (A + B + C) | | 100 |



| Rating Multiplier | |
|-------------------------|--------|
| Level of Responsiveness | Rating |
| Irrelevant | 0% |
| Poor | 25% |
| Satisfactory | 50% |
| Good | 75% |
| Very Good | 90% |
| Excellent | 100% |

The applicant scoring equal to or more than 70% in the technical evaluation shall be considered for financial evaluation. **80% weightage will be awarded for the Technical Proposal, and 20% weightage will be awarded for the Financial Proposal.** Technical Bid will be assigned a technical score (Ts) out of a maximum of 100 points.

The individual organization's Financial Scores (Fn) are normalized as per the formula below:

$F_n = F_{min}/F_b * 100$ (rounded off to 4 decimal places) Where,
Fn = Normalized commercial score for the organization under consideration

Fb = Absolute financial quote for the organization under consideration

Fmin = Minimum absolute financial quote Formula for final evaluation:

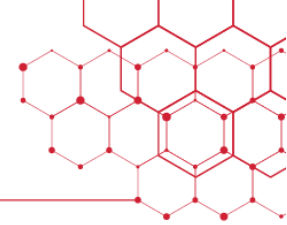
Composite Score (S) = Ts * 0.80 + Fn * 0.20

The organization with the highest Composite Score (S) would be considered for the award of the contract and will be called for negotiations if required.

14. Terms of payment

The lump sum contract is structured to include deliverable-based payments spread over five quarters. Payments are tied to specific deliverables, with different percentages allocated to each quarter based on the completion and approval of these deliverables by the competent authorities at CDRI. The breakdown of payments and the associated deliverables for each quarter are outlined in the table below.

| S. N. | Quarter | Payment Percentage | Linked Deliverables |
|-------|---------|--------------------|---|
| 1 | Q1 | 25% | i. Inception Report ii. Monthly progress report(s) |
| 2 | Q2 | 25% | iii. Biennial Report Chapters given below: • Deepening and projecting tasks • Downscaling for Chile and Fiji • Monthly progress report(s) |
| 3 | Q3 | 25% | iv. Progress reports on Downscaling activities |
| 4 | Q4 | 10% | v. Progress Reports on Data Platform Updates and Dissemination Activities. vi. Draft Report on Downscaling Activities vii. Monthly progress report(s) |
| 5 | Q5 | 15% | viii. Final Reports and full handover of all data |



15. Standards of quality

Information and data created according to the RFP should follow internationally accepted standards and practices.

16. Proposal Submission

Please share proposals in **two separate PDF files**:

1. **Technical Proposal (Open PDF file)**
2. **Financial Proposal (Password-Protected PDF File)**

Note: The Financial Proposal PDF must be password-protected. The password for FINANCIAL PROPOSAL MUST NOT BE SHARED ALONG WITH THE PROPOSAL. The password for the financial proposal will be requested separately.

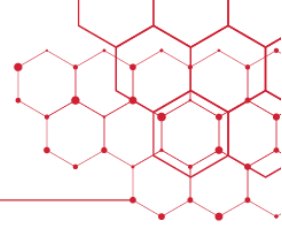
The proposal must be sent to the email address tender.projects@cdri.world with the subject line: "Development of the Second Iteration of the Global Infrastructure Risk Model and Resilience Index (GIRI)."

Interested bidders are requested to submit their proposal by 23:59 hrs (IST) on 28 February 2025. Responses received after the stipulated time or not in accordance will be summarily rejected.

Please ensure that your proposal is sent ONLY to ABOVE MENTIONED email ID before the closing date & time. Proposals sent/copied to any other email ID (other than above) OR received after the bid closing date & time (mentioned above) will not be entertained.

17. Other Terms & Conditions

- i. The proposals should be valid for 90 days after the final submission date.
- ii. An Association/ Joint Venture/ Consortium is allowed. Bidders participating as a consortium must submit a consortium agreement clearly defining the lead agency (notarized on INR 100 stamp paper) along with the proposal, clearly outlining the roles, responsibilities, and obligations of each member. The association of Agencies shall be evaluated as a single entity as per the qualification/ eligibility criteria outlined in the RFP. If any member of the Association of Agencies is dropped during or at any time after the RFP stage, such an association of the Agency is liable to be rejected by CDRI or lead to the termination of the contract.
- ii. CDRI reserves the right to cancel this Request for proposal before or after the receipt of proposals or after opening the proposal and call for fresh proposals. CDRI also has the right to reject any proposal without assigning any reason.
- iii. Proposals incomplete in any respect will not be considered.



Annexure-I: Format of Pre-Proposal Queries

Date:

To

Procurement Division
Coalition for Disaster Resilient Infrastructure (CDRI)
New Delhi-110001

Sub: Hiring an Organization for the Development of the Second Iteration of the Global Infrastructure Risk Model and Resilience Index (GIRI)

Dear Ma'am/Sir,

Following are the clarifications and comments from the terms and conditions and scope of work for the subject RFP. These clarifications are exhaustive.

| S. N. | Clause no. and page reference | RFP text | Query |
|-------|-------------------------------|----------|-------|
| 1 | | | |
| 2 | | | |
| | | | |
| | | | |

Yours faithfully,

Authorized Signatory
(with Name, Designation, Contact no. and Seal)