

Request for Proposal

Date: 26 July 2024

Hiring an organization to develop and conduct the second edition of the Global Infrastructure Resilience Survey (Infrastructure Professionals and Experts)

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 promote the resilience of new and existing infrastructure systems to climate and disaster risks in support of sustainable development. CDRI's vision, mission, goal, and objectives are explicitly linked to the post-2015 development agendas. The Coalition will also contribute to the resilience of global infrastructure systems in an increasingly interconnected world.

In October 2023, CDRI released the inaugural edition of its Biennial Report, titled "Global Infrastructure Resilience: Capturing the Resilience Dividend." This report serves as a key tool for engaging and directing the attention of a global audience, including political leaders, policymakers, practitioners, and researchers, toward the multifaceted and critical challenges confronting disaster and climate-resilient infrastructure. It plays a pivotal role in shaping CDRI's Strategic Priorities around Research, Knowledge Management, and Capacity Building.

2. Biennial Report on Global Infrastructure Resilience: Edition 2

CDRI plans to publish the second edition of the Biennial Report by October 2025 (hereafter referred to as "the Report"). The Report will build on the comprehensive risk assessment methodology with global applicability developed for the first report. It aims to answer some of the questions raised during its preparation and dissemination, expanding its remit and strengthening the connections between risk analysis and the financial, institutional, and technological dimensions of resilient infrastructure.

The Report is organized along two main pillars. The first pillar is based on a series of modeling 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 is the resilience dividend" to the "How to capture the resilience dividend."

Pillar 1: Deepening, Downscaling, Projecting - The 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 databases, (ii) undertaking specific assessments of economic and poverty impacts due to infrastructure services failures caused by disasters, 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 modeling exercise to incorporate future expected trends, including investment trajectories to achieve the infrastructure-related Sustainable Development Goals (SDG) targets, the projected growth of urban centers, and related areas of analysis.

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. The first report also took the first steps in analyzing how more resilient and climate-adapted infrastructure can be built and maintained, including nature-based solutions and financial 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?”

3. Global Infrastructure Resilience Survey (GIRS)

The Second Edition of the Global Infrastructure Resilience Survey (GIRS) aims to evaluate the resilience of infrastructure systems worldwide in the face of various hazards and challenges. While the first version of the survey provided valuable insights, it underscored the need for a second iteration to enrich the understanding of global infrastructure resilience further. GIRS was designed to delve into institutional and human capacities across nations in key infrastructure sectors such as water, energy, transport, and telecommunication. By grasping infrastructure contexts within and across nations, the survey offered insights into how systemic differences in management might be regionally or culturally bound. This understanding laid a strong foundation for upgrading the quality of infrastructure management, either through decisive change or by ensuring effective growth and integration of infrastructure systems in the future. Initially collecting information from infrastructure experts to understand key features of infrastructure development management, the survey also intended to gather insights from non-experts to showcase the relationship between qualitative factors and effective infrastructure service. The survey for non-experts could not be rolled out in the first edition for various reasons.

GIRS' outputs revealed critical institutional and human capacity areas crucial for successful infrastructure development, creating global geographic insights into where and how investments and upgrades in the enabling environment should occur. In tandem with improvements in engineering, higher-resolution satellite data, and stronger climate models, GIRS uniquely captured the human and institutional realities of infrastructure management through a global database. Due to constraints in outreach and the inability to generate a significant representative sample, the survey results were included as pilot findings with the commitment to run a more elaborate version in Edition 2 of the report.

4. Background for Edition 2 of the Survey

CDRI plans to launch Edition 2 of the Global Infrastructure Resilience Survey (GIRS) with more detailed and robust analyses. The survey will involve a diverse range of infrastructure professionals and experts, including engineers, architects, economists, and planners, ensuring a comprehensive understanding of infrastructure challenges and opportunities. The survey will focus on professionals working on downstream aspects of infrastructure (construction, maintenance, operation, repairs, use) who are thoroughly familiar with how institutions, policies, and governance operate in the field.

The survey will be conducted in two parts:

- **PART 1 – Infrastructure Professionals and Expert Opinions:** This part will gather insights from professionals in the infrastructure sector, focusing on technical aspects and strategic considerations in infrastructure development and maintenance. The insights will be collected through a combination of an online survey and a limited number of focus interviews in each country.
- **PART 2 - User Experience:** This part will collect feedback from those directly affected by infrastructure failures, providing data on the economic and operational consequences of such deficiencies for businesses.

This dual focus enriches the data collected and helps formulate strategies that address both technical and practical aspects of infrastructure planning and management. **The Terms of Reference are published to onboard an organization to undertake PART 1 of the survey.**

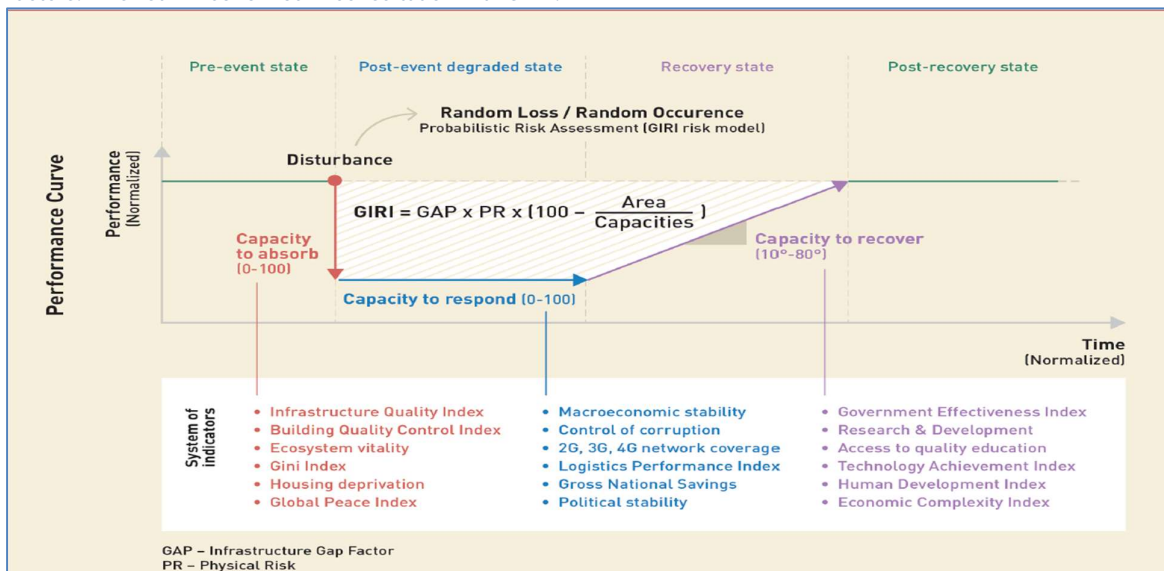
The Second Edition of the Global Infrastructure Resilience Survey (GIRS) stands out from other global surveys like the WEF's Global Competitiveness Report, the OECD's Survey on the Governance of Critical Infrastructure Resilience, and the World Bank's Infrastructure Diagnostic Survey through its unique approach. While the WEF survey evaluates infrastructure as part of overall economic competitiveness, GIRS focuses specifically on resilience to hazards. Unlike the OECD survey, which emphasizes governance structures, GIRS includes a broader institutional and human capacities analysis. Compared to the World Bank survey, which prioritizes technical and financial metrics, GIRS integrates these with insights from both experts and non-experts to capture qualitative aspects of infrastructure management. This holistic and inclusive methodology allows GIRS to provide detailed global insights into infrastructure resilience, highlighting regional and cultural differences in management practices.

In Edition 2, GIRS will cover a wide range of contexts across all regional and income geographies, with a goal to reach at least 40-50 countries with complete information and a stretch target of an additional 30 countries with partial information. The 40-50 countries are expected to have data compiled from 2-3 in-depth interviews and a survey with a statistically significant number of answers from infrastructure professionals in each country. The additional countries will have some information from surveys and some interviews but at levels insufficient for a comprehensive review but with a helpful basis for future surveys and background information.

The survey is the first step toward developing the GIRI Composite Index, introduced in Edition 1 of the Global Infrastructure Resilience Report. The GIRI Composite Indicator integrates financial risk metrics with indicators representing the capacity to absorb, respond, and recover from hazard events, mapping resilient infrastructure globally at the national level. The results from GIRS will enrich the GIRI Index by potentially replacing some indicators from global databases with qualitative indicators developed from the survey. For example, current global indicators on policy implementation might be replaced with qualitative data on policy effectiveness gathered directly from survey respondents in diverse regions.

The organization will work closely with the GIRI team to design the survey questions, indicators, and ratings to ensure seamless coordination and data use.

Figure 1: Proposed GIRI Composite Indicator in Edition1 of CDRI's Biennial Report The goal is for GIRS to provide the data and information to allow CDRI to develop a recognized standard for assessing infrastructure resilience, aiding countries in identifying areas for improvement in institutional, policy, and capacity aspects. The long-term aim is to conduct GIRS biennially, using a system of indicators related to resilient infrastructure capacities such as policy, maintenance standards, accountability and enforcement, disaster response capacity, financial capacity, institutional stability, and community factors. This list will be refined in consultation with CDRI.



Additionally, the survey design and analysis will require coordination with other elements of the CDRI Biennial Report Edition 2. The consultants working on the financial, institutions, and governance and the GIRI risk modeling will coordinate with the organization to ensure a seamless presentation in the final version of the Biennial Report.

The Survey work will be supported by a Technical Advisory Group (TAG), a team of global experts on resilient infrastructure, surveys, and institutions. This TAG will review the inception report and survey approach, the draft survey and interview questionnaires (including indicators and rankings), and the draft outputs of the Survey work.

5. Survey Objectives

- **Support the Assessment of Infrastructure Resilience at the National Level:** Provide elements to assess the national capacity of infrastructure systems globally to absorb, respond, and recover to disasters from the perspective of professionals working on infrastructure sectors
- **Understand Institutional and Human Capacities:** Collect and analyze data on the institutional, governance, and human capacities in infrastructure across different nations to understand systemic differences in management. These would include resilient infrastructure policy, maintenance and standards, accountability and enforcement, disaster response capacity, financial capacity and instruments, institutional stability, and technical capacity, among other factors.
- **Collect Broader Perspectives:** Compile perspectives through surveys and interviews to allow for an integrated view of national infrastructure systems from local experts engaged in the design, construction, operations, and repairs of infrastructure systems.
- **Support the development of the GIRI Composite Index and the GIRI analysis as a global standard:** Design a survey to collect information to be used in further developing the GIRI Composite Index, including indicators and metrics designed to represent the capacity of national infrastructure systems to absorb, respond to, and recover from disasters. The ultimate goal is to make GIRI the standard for assessing infrastructure resilience.
- **Enhance Understanding of Infrastructure Management Quality:** Provide insights into how regional, institutional, governance or cultural differences in infrastructure management can be addressed to improve the resilience of infrastructure systems.
- **Identify Improvement Areas:** Using the insights gained from the survey, help countries identify areas for improvement in institutional, policy, and capacity aspects of infrastructure to enhance their capacity to absorb, respond to, and recover from disasters.

6. Scope of work

The activities in this scope of work will be undertaken by the organization in close coordination with the CDRI Biennial Report Project Team, Lead Author, and Senior Advisor. They are also to be designed in close collaboration with other consultants working on the report. Finally, the technical advisory group will review the key outputs described in this scope of work.

1. Survey and Interview Questionnaires Development and Review:
 - Co-design with CDRI comprehensive questionnaires for the survey and interviews covering all aspects described in these TORs.
2. Pilot Testing:
 - Conduct pilot testing to ensure questions are clear and effective in compiling the necessary information to achieve the objectives of this work.
 - Refine questions based on feedback to eliminate ambiguities and enhance the effectiveness of surveys and interviews.

3. Survey and Interview:

- Conduct in-depth interviews and engage with professional societies and industry bodies related to infrastructure, e.g., engineering associations in the target countries, to promote the survey and identify professionals with the necessary experience and understanding of resilience in national infrastructure systems and services.
- Through targeted social media campaigns, aim to reach a substantial sample of survey respondents

4. Data Analysis:

- Use advanced statistical tools and techniques for thorough survey data analysis
- Implement rigorous quality assurance processes to ensure data accuracy and reliability

5. Inputs to Other Report Chapters:

- The survey findings will be of interest to other report chapters, particularly the financial, institutional and governance, and GIRI modeling chapters. Engage with the teams preparing those chapters to ensure seamless cross-fertilization of approaches and findings.

6. Combined Quantitative and Qualitative Analysis:

- Combine the results of the survey and interviews in an integrated country-level analysis (and possible ranking) of resilient infrastructure and its institutional, governance, and capacity issues.

7. Expected Deliverables

1. Inception Report:

- Inception report describing approach, milestones, and timetable, with specific focus on target country selection and delivery approach for survey and interviews

2. Survey and Interview Design Report:

- Initial report outlining the design and methodology for the survey and interview; implementation approach; proposed survey platform; proposed social media outreach; proposed engagement with national organizations to support the survey; data quality assurance; and proposed data analysis approach.
- Proposed questionnaires for survey and interviews

3. Survey Delivery Platform:

- Development of survey platform (or repurposing of existing platform) for survey to be available in English and the main languages used in several target countries (e.g., Spanish and French)

4. Survey Dissemination Plan:

- Detailed plan for distributing and promoting the survey to target respondents.

5. Revised Survey and Interview Questionnaires:

- Based on the pilot testing, revised questionnaires

6. Brief Advice Notes:

- Exchanges with the CDRI team and other consultants working on the report that need inputs and advice from the Survey Organization

7. Comprehensive Survey Report:

- Final report including data analysis, key findings, and insights from the survey.

- Summary chapter for the Second Biennial Report presenting the main findings from the survey report
- Raw data
- Engagement with the CDRI team and consultants working on the GIRI website for display of data, technical text for explanatory notes, and overall design advice

In addition to the above payment-linked deliverables, the Organization will be required to prepare presentations for reporting meetings to CDRI and the Technical Advisory Group.

8. Period of engagement

The Organization is expected to complete the second version of the GIRS within 10 months, with regular progress updates provided to the project stakeholders. To that end, a detailed work plan and schedule of deliverables must be submitted as part of the Technical Proposal.

9. Budget

The Organization shall provide a detailed budget proposal outlining the costs of conducting the survey, including personnel, technology, and other resources.

10. Qualification criteria:

1. Expertise in Resilient Infrastructure: The proposal must demonstrate the Organization's proven experience of delivering similar global assignments in the past, with the Team Lead leveraging over 20 years of experience and expertise in resilient infrastructure development.
2. Innovative Survey Methodologies: Ability to develop innovative survey methodologies and approaches, leveraging cutting-edge techniques to capture nuanced insights into infrastructure resilience challenges and opportunities.
3. Efficient Resource Management: Robust planning and allocation of resources, including personnel, technology, and budget, to maximize project efficiency and deliver high-quality results within specified timelines.
4. Stakeholder Engagement and Collaboration: Experience in engaging a wide range of stakeholders, including national governments, UN agencies, private sector entities, and academic institutions, ensuring comprehensive data collection and stakeholder buy-in and have wide networks with national and regional partners representing infrastructure professionals in all regional and income geographies. Also, demonstrated relations with engineering associations or similar stakeholder groups in a large number of countries, both developed and developing.
5. Strong Analytical Skills and Reporting: Strong analytical skills and proficiency in data analysis tools and techniques, enabling the extraction of actionable insights from survey data and the preparation of clear and compelling reports.

11. 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 should 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.

12. Evaluation

- i. The organization will be selected following a Quality Cum Cost Basis (QCBS) of selection.

ii. Proposals shall be evaluated as follows: **Evaluation Criteria for Technical Bids 100 points:**

S N	Technical Evaluation Criteria	Description	Maximum Marks
1	Methodology	The proposed methodology for conducting the survey, including data collection, analysis, and reporting techniques, and approach to reach a large number of engineering associations or similar stakeholders in a large number of countries, developed and developing	40
2	Expertise	The Organization's/ proposed Team's expertise and experience in conducting similar surveys and projects, especially in the field of infrastructure resilience.	10
3	Innovation	The level of innovation and creativity demonstrated in the proposed approach to survey design and implementation.	10
4	Resource Allocation	The adequacy and efficiency of proposed resource allocation, including personnel, technology, and budget planning.	10
5	Risk Management	The Organization's plan for identifying and mitigating potential risks throughout the project lifecycle.	10
6	Stakeholder Engagement	Wide networks with national and regional partners representing infrastructure professionals in all regional and income geographies. Demonstrated relations with engineering associations or similar stakeholder groups in a large number of countries, both developed and developing	20
Maximum Marks			100

Rating Multiplier for Methodology, Approach	
Level of Responsiveness	Rating
Irrelevant	0%
Poor	25%
Satisfactory	50%
Good	75%
Excellent	100%

iii. The organizations scoring more than 70% in the technical evaluation shall be considered for financial evaluation. 75% weightage will be awarded for the Technical Proposal and 25% weightage will be awarded for the Financial Proposal. Technical Bid will be assigned a technical score (Ts) out of a maximum of 100 points.

iv. The 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,
 F_n = Normalized commercial score for the Organization under consideration
 F_b = Absolute financial quote for the Organization under consideration
 F_{min} = Minimum absolute financial quote
 Formula for final evaluation:

$$\text{Composite Score (S)} = \text{Ts} * 0.75 + \text{Fn} * 0.25$$

- v. 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.

13. Terms of payment

This will be a lumpsum contract following deliverable-based payment on the following terms.

S N	Deliverables	Payment Terms (% of Contract Price)
1	Survey and Interview Design Report	20%
2	Completion and successful launch of the survey on the selected online platform in English and other languages as agreed	20%
3	Report highlighting feedback and recommendations from Expert Advisory Group along with revised Survey and Interview Questionnaires and detailed Survey dissemination plan	30%
4	Comprehensive Survey Report, including data analysis and key findings, and Summary Chapter for the Second Biennial Report	30%

14. Reporting Structure

The Organization will report to the Director (RKM&CD) and Lead Specialist–Biennial Report providing regular updates on progress, challenges, and key decisions.

15. Other Terms & Conditions

- i. The proposals should be valid for 90 days after the final submission date.
- 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.
- iv. Please note that the organization must clearly disclose the contractual and payment terms in its proposal.

The organizations are requested to submit their proposal through email to tender.projects@cdri.world by 23:59 hrs (IST) on 12 August 2024. 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.
