

Request for Proposal

Date: 15 January 2025

Hiring a Consultancy firm to Develop Airport Preparedness Measures for Climate Risks to Enhance Adaptive Capacity and Infrastructure Resilience.

1. Background

The Coalition for Disaster Resilient Infrastructure (CDRI) is an international organization and a global multi-stakeholder partnership of national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and academic and knowledge institutions that aims to promote the resilience of new and existing infrastructure systems to climate and disaster risks in support of sustainable development. CDRI promotes its Disaster Resilient Infrastructure (DRI) mandate through knowledge exchange and bolstering technical capacities among member countries and partners through the following key Strategic Priorities:

- Program Support and Technical Assistance
- Research, Knowledge Management and Capacity Building
- Advocacy and Partnerships

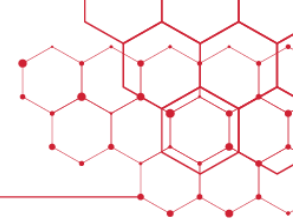
In line with the Strategic Priorities around Program Support and Technical Assistance, CDRI commissioned "Global Study on Disaster Resilience of Airports (GSDRA)", one of its kind study focused on developing a comprehensive set of recommendations on disaster risk management and resilience of existing and future airports. GSDRA aims to identify vulnerabilities, assess current preparedness measures, and propose strategies to enhance the capacity of airports to withstand and recover from adverse events.

2. Global Study on Disaster Resilience of Airports: Phase 1

This global study provides an incisive look at the current state of practice of disaster risk management and resilience of airports, across the globe by gathering information from airports around three questions:

- a) What is the current perception of hazard and disaster exposure at airports? (Disaster Impact Context)
- b) How do airports perceive their resilience to climate and natural hazards? (Risk Assessment Practices)
- c) What are the current practices in airport resilience? (Adaptive Capacity).

The report is an outcome of a survey of airports across regions with the participation of 111 airports from 54 countries and focus group discussions of airport representatives' perceptions of airport resilience. This report was released during ICDRI 2023 and accentuates the need for airports to conduct periodic vulnerability assessments and develop a resilience strategy to mitigate risks.



3. Global Study on Disaster Resilience of Airports: Phase 2

A comprehensive disaster risk study of infrastructure and resilience financing mechanisms across 13 airports in 12 countries, encompassing various hazards and climate risks impacting airports. This study is expected to develop an airport risk index with a deeper understanding of system interdependencies, investment and non-investment bottlenecks, and resilience measures on stressors and business continuity plans. The consultations with these 13 airports are currently in progress (12 countries: Australia, Bhutan, Fiji, Germany, India, Italy, Japan, Madagascar, Mauritius, Peru, UAE (Abu Dhabi) and USA). Combining the findings and recommendations from phases 1 & 2, a comprehensive set of recommendations on disaster risk management and financing for the resilience of existing and future airports will be developed.

4. Context

Understanding the need to enhance the capacity of the airport operators/managers and authorities on preparedness to disaster and climate risks, CDRI intends to develop a set of preparedness measures for infrastructure and operational resilience of airports to certain identified acute and chronic climate risks. Further, these measures would inform the decision-making processes to develop/ revise policies related to infrastructure and operational resilience measures, financing towards adaptation and resilience interventions, and disclose information for risk sharing among stakeholders and insure the vulnerable assets.

5. Objectives of the assignment

- Develop suggestive measures (structural and non-structural measures) to support airport operators and regulators to enhance preparedness to adapt, swiftly resume, and recover from extreme weather events and climate change, and safeguard infrastructure and related investments.
- Support policy and operational decision-making by providing actionable recommendations for a Business Continuity Plan focused on pre-, during, and post-disaster events.
- Strengthen recommendations through documented case studies and good practices, enabling airports to integrate resilience measures into the airport infrastructure life cycle.

6. Scope of work

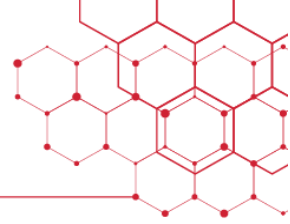
The Consultancy firm shall work in close coordination with the Transport Team at CDRI Secretariat and will develop the following to be finalized post-validation from industry stakeholders. The assignment consists of four main parts (Part A, B, C, D & E):

Part-A: Suggestive Measures/ Guidance Note for Airport Resilience to Hazards/ Risks (for airport owners/ operators/ managers):

Develop a separate set of preparedness measures divided into (structural and non-structural measures) to enhance the infrastructure and operational resilience of the airport for each of the following 17 hazards/risks:

1. Flooding

- a) Pluvial Flooding



- b) Fluvial Flooding
- c) Tidal Flooding
- d) Rise in Groundwater table level
- 2. Precipitation**
 - a) Rain
 - b) Snow
- 3. High wind**
- 4. Combination event of high wind and high precipitation:**
 - a) Cyclones/Hurricane/Tornado
 - b) Storm Surge
- 5. Extreme heat**
 - a) Prolonged Heat
 - b) Heatwave
- 6. Dust and Sandstorms**
- 7. Visibility**
 - a) Fog/ Haze
- 8. Earthquakes**
 - a) Tremor
 - b) Liquefaction
- 9. Sea-Level Rise**
- 10. Wildfire**

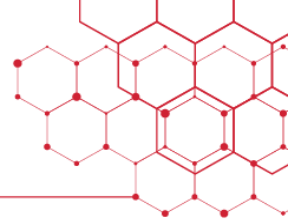
Each advisory (Total of 17 Advisories) should focus on airports as a whole and critical airport assets specifically and not limited to terminal buildings, ATC towers/ communication systems, runways, and power systems. The measures should be easily integrated into the Business Continuity Plan and shall be categorized into:

- Structural and Non-Structural Measures
- Short-, Medium-, and long-term Measures
- Pre, During and Post-disaster Measures

The measures shall serve as Do's and Don'ts guide as per the ICAO/ ACI/ Other Global and Regional Organizations guidelines. Therefore, these measures shall be:

- i. Linked to references of protocols, design publications, guidelines, recommendations, and code of practices of ICAO, ACI, and Regional benchmarking committees/ authorities/ organizations.
- ii. Provided with a checklist, assessment formats, and frameworks.
- iii. Other relevant references to specific crisis management guidelines and operational protocols to prepare for, respond to, and recover from each hazard.

Part-B: Policy Guidance for Airport Resilience (for airport authorities and regulators)



The policy guidance notes should focus on equipping airport authorities and regulators with actionable strategies to enhance resilience against extreme weather events and climate risks. These recommendations should be actionable and categorized for key stakeholders to adopt and implement the adaptation and resilience interventions suggested in the Part-A deliverable. These recommendations shall encompass the following:

1. Implementation of adaptation and resilience measures.
2. Mobilizing financing towards adaptation and resilience interventions.
3. Risk Sharing and Insurance mechanisms.

Part-C: Detailed Guidance Note to Risk Assessment Framework of ICAO

A detailed guidance notes on conducting a risk assessment of airport infrastructure and systems to be developed in a simplified way for scenarios like:

- i. size of the airport
- ii. geographical location (coastal, mountain, flood plain, urbanized areas)

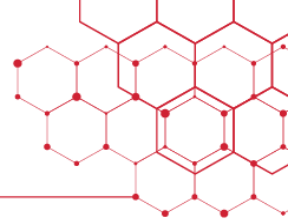
This would have a flow-chart, templates for data collection, assessment forms, explanatory notes on using these, and a detailed use case of one airport (hypothetical/real data) for elevate the understanding of the user on this document.

Part-D: Case Studies on Airport Infrastructure Resilience

- Develop three (03) case studies/ examples for each of the aforementioned hazards to highlight effective resilience and adaptation practices in airport infrastructure.
- Each case study should focus on adaptive measures, relevant good practices, lessons learned from the measure/disaster event (successful/failure cases), and how airports responded to and recovered from each hazard, including siting, design, operations, and maintenance of infrastructure systems.
- The case studies shall be documented in the standard CDRI template provided unless agreed for special cases considering the limited data availability.

Part E: Detailed guidebook for procurement management, focusing on incorporating DRI into the planning process and management in Airports

- The guidebook should suggest processes and measures for integrating disaster-resilient infrastructure (DRI) practices into airport planning and procurement processes.
- This shall highlight contract processes for designing and construction, selection criteria for material and technical/ skilled human resources to align with disaster-resilience standards/ global benchmarks/ accreditations on sustainability and resilience to support climate adaptation and risk reduction in airport infrastructure.
- The manual shall also focus on how to adapt the planning process and approval mechanisms within airport authorities to prioritize infrastructure resilience.



- This manual should address both current and upcoming airport infrastructure developments, focusing on projects that may need retrofitting or redevelopment to enhance infrastructure resilience.

7. Deliverables

- **Inception Report:** The consultancy firm shall submit a short note (maximum 4 pages) on deliverables along with the template for deliverables under Part-A & B, within 07 working days of signing the contract.
- **Deliverable of Part-A:** 17ASA no's separate Suggestive Measure/ Guidance Note (structural and non-structural measures) to be submitted for each of 17 hazards/risks. The final version of each is expected to be 1 pager and strictly not more than 2 pages unless agreed specifically. Any references and case examples shall be separately provided as an annexure.
- **Deliverable of Part-B:** 03 no's of separate Policy recommendations, final version of each expected to be 1 pager and strictly not more than 2 pages.
- **Deliverable of Part-C:** 01 no. of detailed Guidance Note on Risk Assessment of Airport to climate risks.
- **Deliverable of Part-D:** 03 no's of case examples/ studies for each of 17 hazards/risks mentioned as the scope in Part-A. These should be provided in the Standard CDRI Case Study Template.
- **Deliverable of Part-E:** 01 no. of procurement guidebook for integrating disaster-resilient infrastructure (DRI) into airport planning and procurement process.

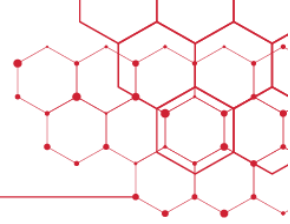
Note: Should there be a need to prioritize the above deliverables for ease in managing the time and resources at the consultancy level, then the order of priority is Part A > Part D > Part C > Part B > Part E. Any deviation in the above deliverable(s) should be agreed with CDRI in writing.

8. Quality Assurance:

Quality assurance would be ensured in 2 levels of verification. Each level builds upon the previous one, ensuring a thorough and comprehensive validation process before the final deliverables are approved.

Level-1: Joint periodic review by CDRI and Consultancy Firm: A series of structured checkpoints scheduled every 2 weeks to review and refine the deliverables on technical accuracy, relevance, and alignment with the objectives and scope of work.

Level-2: Stakeholder Consultation: to gather technical feedback engaging with representatives from regulatory bodies, government agencies, industry associations and thought leaders. This could include ACI World/ACI regional representatives, ICAO, EASA and at least two major airport operators. This endorsement is part of finalizing the content and deliverables. The Consultancy firm is responsible for getting the above delivered vetted/ reviewed and endorsed by the aforementioned entities for greater benefit and adoption by the stakeholders, worldwide.



9. Timeline for delivery

The consultancy firm will deliver

- i. Draft of all the outlined deliverables (Part A to E) within 60 business days or before 30th April 2025, whichever is earlier.
- ii. Finalization of these drafts should happen within 30 business days, post submission of draft.
- iii. Specific milestones and review dates are to be agreed upon at acceptance of the inception report.

A. Reporting

The consultancy firm will work in close coordination with Advisor-Transport Sector, CDRI for the overall content and deliverables, providing regular updates on progress and challenges; while reporting to Lead Specialist – Program Management and Technical Support and overall reporting to the Senior Director, Program Management and Technical Support for key decisions.

B. Qualifications

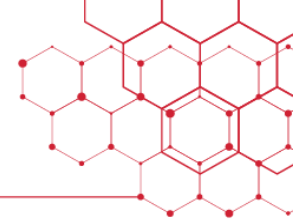
- The consultancy firm should have a skilled team with expertise in developing clear, actionable policy recommendations, and concise technical writing, particularly within the context of infrastructure resilience and climate adaptation strategies, essentially in the airport sector.
- The consultancy firm should have demonstrated experience in developing knowledge management and technical documents like guidance notes, risk assessments, or policy recommendations related to climate risks or specific hazards.
- The consultancy firm should have experience working with or for airports, relevant government authorities, international organizations (namely ICAO, ACI, EASA), or similar stakeholders on related projects, ensuring an understanding of airport-specific needs and requirements.
- The consultancy firm should demonstrate that it has adequate personnel available with the required expertise to meet project deadlines and manage multiple deliverables concurrently due to a relatively short time frame.
- Desired qualifications of technical experts shall be in Civil and Transportation engineering, aeronautical and aerospace engineering and/ or related degree in sustainable development and climate change with a proven track record of professional experience working in airport related projects.

C. Submission

Please share proposals in two separate PDF files:

a) **Technical Proposal (Open PDF file)** catering to the following:

1. **Curriculum Vitae:** Outlining relevant academic and professional experience and expertise that demonstrates alignment to the key objectives, scope of work, key competencies and the overarching thematic focus of Airport Infrastructure Resilience.



2. **Technical Approach & Workplan:** A detailed description of the proposed approach and workplan for the outlined deliverables, based on the respective key objectives and scope of work.
3. **Timeline:** An estimated timeline for outlined deliverables, based on the respective key objectives and scope of work.

b) **Financial Proposal (Password-Protected PDF File):** A detailed cost estimate for the proposed work based on consultancy rates per day and the number of human days to be entailed for this work. This proposal must cover all aspects mentioned in the scope of work. All payments shall be subject to tax deduction at the source as per India's tax laws.

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

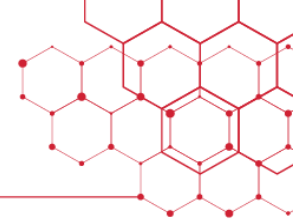
D. Evaluation

- i. The consultancy firm 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 | Maximum Marks |
|------|---|---------------|
| 1 | Academic qualifications and experience of human resources in the aviation sector | 10 |
| 2 | Professional work experience of the consultancy firm (including specific assignments related to the adaptation and resilience of airports) | 40 |
| 3 | Experience of the consultancy firm in working on technical documents and strategic documents/policy recommendations in aviation/ airport sector | 20 |
| 4 | Technical approach and workplan for the assignment | 10 |
| 5 | Experience of the consultancy firm's working with International Organizations like ICAO, ACI, EASA, and others | 20 |

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

- iii. The consultancy firm scoring 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.

iv. The consultancy firm’s Financial Scores (Fn) are normalized as per the formula below:

- Fn = $F_{min}/F_b * 100$ (rounded off to 4 decimal places) Where,
- Fn = Normalized commercial score for the consultancy firm under consideration
- Fb = Absolute financial quote for the consultancy firm under consideration
- Fmin = Minimum absolute financial quote

The formula for final evaluation:

Composite Score (S) = $T_s * 0.80 + F_n * 0.20$

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

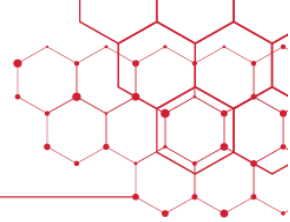
E. Terms of payment

This would be a lump-sum contract with the following payment schedule or as mutually agreed. Payments will be made upon approval of the submissions/deliverables by competent authorities at CDRI

| S. N. | Deliverables for 6 months beginning from the date of onboarding | Payment (%) |
|-------|---|-------------|
| 1 | The consultancy firm shall submit a short note (maximum 4 pages) on deliverables along with the template for deliverables under Part-A & B & E within 07 business days of signing the contract. | 25 |
| 2 | Submission of draft of Part A (8 preparedness measures) + Part D (24 case studies) + Part B (03 policy briefs) | 20 |
| 3 | Submission of draft of remaining deliverables of Part A+ B+ D | 15 |
| 4 | Submission of draft of Part C + Part E | 10 |
| 5 | Consultation/ Review of the deliverables by ICAO/ ACI | 10 |
| 6 | Final review and submission. | 20 |

F. Standards of quality

Information and data created according to the Scope of Work should follow internationally accepted standards and practices.



G. Other Terms & Conditions

- The proposals should be valid for 90 days after the final submission date.
- 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. Proposals incomplete in any respect will not be considered.
- Proposals incomplete in any respect will not be considered.
- Please note that the organization must clearly disclose the contractual and payment terms in its proposal.

Interested bidders are requested to submit their proposal through email to tender.projects@cdri.world by 23:59 hrs (IST) on 28 January 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.

