Guidelines for the Applications to the
CDRI Fellowship Programme

Instructions: Applications for the CDRI Fellowship Programme shall be accepted through the online Fellowship Portal provided below. Applications submitted through emails or any other mode shall not be considered. This document provides guidelines for preparing the draft of Research Proposal and related documents. For any clarification or suggestion, please write to Fellowship@cdri.world. The language for the application is English. For latest updates on the CDRI Fellowship Programme, please visit website www.CDRI.WORLD.

Part A
Basic Information of Proposed Research

1. Title of the proposed research: .............

2. Subject area: .................

   [Hint: Civil engineering, Mechanical engineering, Electrical engineering, Electronics, Computer science, Earth Science, Climate change, Meteorological department, Ecology, Sustainability, Public safety, Policy, Risk financing, etc.]

3. Infrastructure(s) in focus: ..............

   [Hint: Transportation, Telecom, Power, Ports, Aviation, Nature-based solutions, etc.]

4. Disaster(s) in focus: ......................

   [Hint: Earthquake, Cyclone, Drought, Landslide, Flood, Lightening, etc.]

5. Nature of research work: ......................

   [Hint: New product development, Software/technology, Theoretical research, Policy, Regulations/process management, etc.]

6. Potential for Patents, Intellectual property rights, or research papers: ......................

   [Hint: Yes, No, May be]

7. Estimated time and budget for overall research work: ..............

   [Hint: Months/ Budget in USD]
Part B
Details expected in the Research Proposal

Instructions:
There are nine questions designed to facilitate preparation of a structured research proposal. While answering these questions, applicants should be in position to convey
- what is the precise problem related to disaster resilience infrastructure (DRI) that will be solved;
- what is the innovative solution;
- how will this solution address the problem under consideration; and
- what were the underlying assumptions?
Each question has some suggestions to facilitate drafting of the proposal. These suggestions are only indicative, and applicants should write answers in a way best suited to their research. Please cite relevant literature wherever applicable in the form (Author, year).

Each of nine question seeks answer in two parts:

- In the 1st part, write summary answer in one or two sentences (up to 50 words).
- In the 2nd part, write detailed answer (up to 300 words). Each question will have an option to attach supporting documents such as Figures, Tables, etc.

Questions

Q1. Research problem: What is the DRI problem being solved in the proposed research?

(i) Summary answer in up to 50 words: --------

(ii) Detailed answer in up to 300 words: --------

Suggestions for Q1:

a. Give a brief description of the infrastructure related issues that you want to cover. The issue should relate to building resilience in infrastructure. Be specific.

b. What are the existing solutions for this issue and how they are currently inadequate to address the issue? Consider reference to some latest research papers/developments to highlight the problem.

c. What are the implications and significance of this inadequacy? For instance, what are the tangible or intangible losses arising out of this issue/inadequacy of existing solutions?

d. Which aspect of this inadequacy, whether in part or full, is being addressed in the proposed research problem?

e. Make sure to drilled down to the “Specific problem” that is being solved.
Q2. Innovation/novelty: What is the innovative idea or concept to solve this problem?

(i) Summary answer in up to 50 words: ---------

(ii) Detailed answer in up to 300 words: ---------

Suggestions for Q2:

a. With respect to the research problem stated in Q1, tell us the crux of the idea which can solve this problem. Give a concise summary of the idea/concept/insight proposed to solve the selected problem.
b. How did you get this idea? How did the insight occur to you? For instance, did you observe new trends in data? Did you make first-hand experiments or observations? Are you planning to extend an existing solution? Are you trying to apply for existing theory/algorithm/code/technology? Are you trying to develop a new product or process? Are you trying to conduct a case study or policy research?
c. Critical thinking about your idea may help in refining the research problem and possible solutions may help in precise answering.

Q3. Proposed solution: What is the proposed solution for the research problem?

(i) Summary answer in up to 50 words: ---------

(ii) Detailed answer in up to 300 words: ---------

Suggestions for Q3:

a. Considering the research problem in Q1 and your idea for solution in Q2, tell us what will be your solution? What is likely to be the end-product of your research?
b. Can you imagine your end-product or solution of your research? It can be a new hypothesis, theory, algorithm, product, process, design, framework, table of values, decision support tools, gadget, circuit diagram, policy, financing structure, case study, etc. Defining outline of your product will help CDRI to evaluate your deliverables in the context of DRI.
c. A proposed solution is different from the Research Methodology (sometimes referred as Solution Methodology, covered in Q4).
Q4. Research Methodology: How will you find your proposed solution?

(i) Summary answer in up to 50 words: 

(ii) Detailed answer in up to 300 words: 

Suggestions for Q4:

a. Research methodology is the process to progress from a research problem to the proposed solution. It may involve laboratory testing, data analysis, simulations, case study, computer coding, product development and testing, interviews, literature review, etc.

b. What are your methods of data collection - experimental setup, interviews, some other qualitative or quantitative data, hypothetical data, scenario analysis, simulations, document analysis, direct observations, big data analytics, etc. What are the actual phenomena you are planning to measure in data collection?

c. What are your methods of data analysis? How will you convert your observations into new research outcome? Your research methodology should clearly provide a flow chart or sequential steps to demonstrate how your research will be conducted.

Q5. Practical application and implications: What are different practical applications of the proposed solutions, and how will it impact the research problem specified in Q1?

(i) Summary answer in up to 50 words: 

(ii) Detailed answer in up to 300 words: 

Suggestions for Q5:

a. Describe/hypothesize/visualize interventions/steps that are required to apply the proposed solutions in the real world. How the applicability of your solution is likely to affect the research problem. Who are the stakeholders benefitting from the solutions? And How?

b. Can you identify the specific elements of resilient infrastructure (design, material, building, practice, maintenance, monitoring system, policy, governance, etc.) where your solution will be useful?

c. Can you identify stakeholders/systems/resources that are required to implement your solution?

d. How do you plan to assess/quantify the amount of impact your solution will bring to improve/change/alter the resilience in infrastructure?
Q6. **Assumptions:** What are important assumptions under which research will be taken up?

(i) Summary answer in up to 50 words: ---------

(ii) Detailed answer in up to 300 words: ---------

**Suggestions for Q6:**

a. The selected research problem, idea, solution, application, all are based on some underlying assumptions. Enlist these important assumptions for the proposed research? It will help in outlining the limitations and scope of the proposed research.

b. CDRI is looking for real world solutions for real-world problems. CDRI acknowledges that every research is performed with certain assumptions to simplify a real-world problem to a research problem. Knowing the assumptions that underlay a research will help you, and the CDRI, in assessing the strength of the solution.

Q7. **Scope and limitations:** What are the scenarios/conditions ‘covered’ and ‘excluded’ from the proposed research?

(i) Summary answer in up to 50 words: ---------

(ii) Detailed answer in up to 300 words: ---------

**Suggestions for Q7:**

a. Making assumptions for research also leads to setting aside/overlooking certain conditions/criteria that are not covered in the research. Also, it relates to outlining the Scope of your research to define a manageable research project.

b. Limitations may make a proposed solution less applicable for certain conditions, but these limitations also clarify the focus of the research.

c. The CDRI is looking to take your solutions to the practitioners in the real world. You can tell us about the specific circumstances where your solution will not work. You can also list some precautions to be taken during implementation of your solution.

d. Research limitations do not make a research proposal weak. It just specifies when the solutions may not be applicable and provides evidence that you have critically evaluated your problem, idea, and the solution.
Q8. References: What are the resources/ papers that support your literature review and research problem?

(i) Important research paper up to 50 words:  

(ii) List of research papers in up to 300 words:  

Suggestions for Q8:
- a. Please provide complete details of most important references following Harvard referencing style/AHP/Others. Cross reference all the sources in the main body of the proposal as (Author, year). A word file/pdf of all references may be attached.

Q9. Any additional highlights: Any highlights of the proposed research may be added here?

(i) Summary answer in up to 50 words:

(ii) Detailed answer in up to 300 words:

Suggestions for Q9:
- a. Please use this section to provide any additional information/details which might help the evaluation committee in assessing the research proposal.
Part C

Templates for providing Documents supporting the Application

Instructions:

Each research proposal should be uploaded with the following documents in the prescribed format. The applicants are requested to keep these documents ready at the time of submitting the research proposal.

(i) Letter of endorsement from a host institute/organization (Annexure C-1) - Optional
(ii) Undertaking by the applicant for the CDRI Fellowship (Annexure C-2)
(iii) Monthly plan of the proposed research (Annexure C-3)
(iv) Budgetary estimates for the proposed research work. The amount of the Fellowship will be limited to the amount specified in the CDRI Fellowship Programme advertisement. (Annexure C-4)
Annexure C-1

Sample letter of endorsement of Research Proposal for CDRI Fellowship Programme

(IN THE LETTER HEAD OF THE ORGANIZATION)

Ref. no:  Date:

To,
The CDRI Fellowship Programme
CDRI Secretariat
4th & 5th Floor, Bharatiya Kala Kendra, 1, Copernicus Marg, New Delhi, 110001, INDIA

Subject: Endorsement of Research Proposal for the CDRI Fellowship Programme

It is certified that the Research Proposal titled [Title of the Research Proposal] being submitted to the CDRI Fellowship Programme is bonafide proposal by [Name(s) of candidates]. The research work is planned to be carried out during [month/year to month/year] at:

Name of the Department/Centre/School/Organization/Supervisor (as applicable) ---
Name of the Institute/Organization ---
Postal address: ---
Email, Phone, and Contact of institute/organization
Country: ----
Email, phone, address of applicant(s) -

Further, it is certified that (keep whichever is applicable)
1. The proposed research is not a duplication of any existing or completed research.
2. The above proposed research is also partly funded by [name of other scholarship] for amount [in USD_____] (Delete if not applicable).
3. Institution/Organization will provide all support to the candidates for conducting the proposed research. (Delete if not applicable).
4. Bank Account details for disbursement of the Fellowship fund are as (with sufficient details for international transactions as per applicable country)

[Name and contact of the signing authority]
With seal and contact details including official email.
Annexure C-2

Undertaking Certificate by the Applicant for the CDRI Fellowship Programme

I, .................................................., son/daughter/wife/ward of ..........................................................., having nationality of -- ..........................................................., Country .............., agree to undertake the following, if I am offered the CDRI Fellowship.

1. I shall abide by the terms and conditions of the CDRI Fellowship Programme.

2. I shall also abide by the rules, discipline of the institution/organization where I will be taking up the research, or where I am endorsed for the CDRI Fellowship.

3. I shall prepare the progress report as per the schedule prescribed by the CDRI.

4. I shall send two copies of the consolidated Research Report at the end of the Fellowship. I will appropriately acknowledge the CDRI in publications/presentations arising out of the research.

5. I further state that I shall have no claim whatsoever for temporary/regular/permanent absorption to the CDRI for employment, etc.

6. I shall follow all the rules and regulations of the native country/country of host institution/global standards, for fair and ethical research.

7. If the project involves field trials/experiments/exchange of specimens, human, and animal materials etc., I agree to submit an ethical clearance from the concerned Ethical Committee.

8. I will respect the copy right laws as applicable.

9a. The submitted research proposal titled – [___________], is original, and it is not a reproduction in any form of any ongoing or past research by someone else.

9b. The above proposed research is also partly funded by [name of other scholarship with amount in USD] if applicable. (delete/cross it if not applicable).

10. I accept that I have furnished correct information to the CDRI Fellowship Programme. If any information is found incorrect or false, the CDRI reserves right to cancel my application at any stage of the Fellowship Programme.

Name and Signature of the applicant: __________________________ Date and Place: __________________________
Annexure C-3
Quarterly milestones of the proposed research

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Planned activities</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:

1. Fellowship period will start from the ‘First Date of the following month’ after the release of first instalment of the Fellowship.
2. Please clearly indicate planned timelines for three progress reviews including final report submissions. Satisfactory performance in the second progress review is mandatory for the release of second instalment of the Fellowship.
Annexure C-4

Estimates budget for undertaking the proposed research work

<table>
<thead>
<tr>
<th>Sl no.</th>
<th>Planned activities</th>
<th>Estimated amount (in USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>Total budget of the proposed research work</td>
<td></td>
</tr>
</tbody>
</table>

(b) Amount of funding received from any other agency (in USD, if applicable)=

Note:

1. These budget details are only for evaluation of the proposed research.
2. In case of proposed budget being higher than the amount offered by the Fellowship, CDRI’s contribution will be limited to the ‘CDRI Fellowship amount as per the advertisement’.
3. An ongoing research project is eligible for the CDRI Fellowship Programme, subject to the consent of the agency which has funded the project initially. Applicants should obtain relevant letter of consent from the agency.