

architecture, planning and design for disaster reduction and reconstruction  
10<sup>th</sup> i-Rec student competition

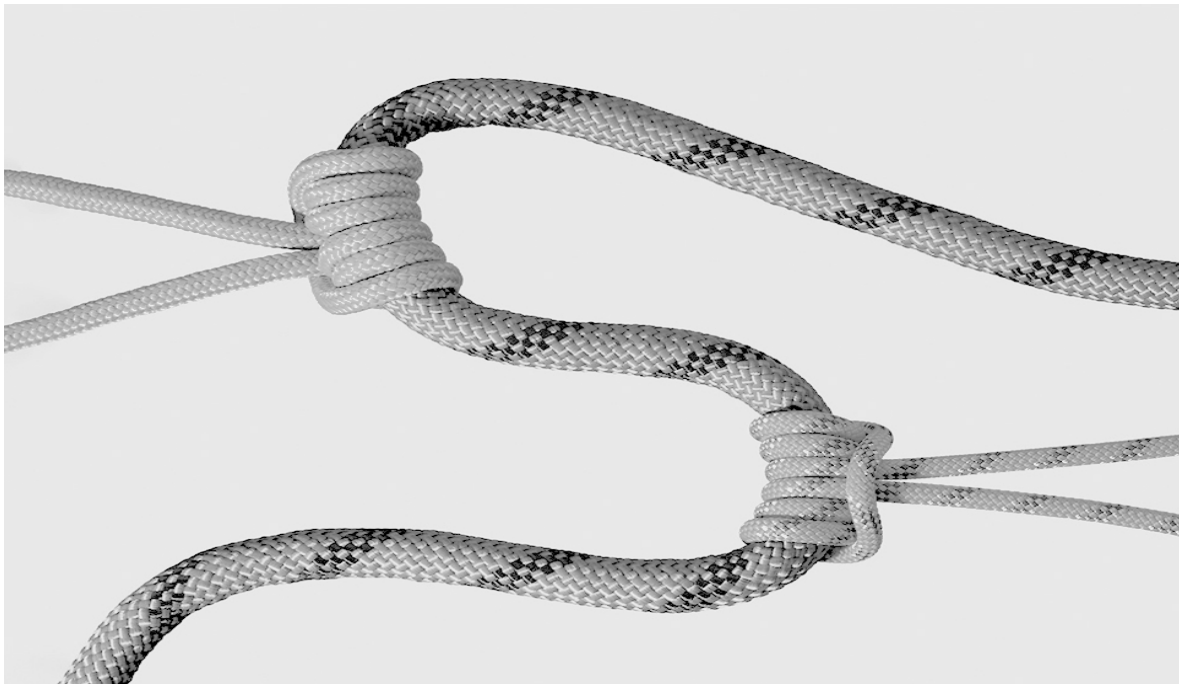


## **BETWEEN TRADITION AND INNOVATION**

**What must change and what mustn't in the face of disasters and climate change?**

in parallel with the 10<sup>th</sup> i-Rec international conference in Sendai, Japan, 2022. Organized by the Disaster Resilience and Sustainable Reconstruction Research Alliance ([Œuvre durable](#)).

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## what types of change?

Disasters are tangible proof that something needs to change in urban settings and the built environment. But the aftermath of a disaster is also a time to reflect on tradition, history, identity, memory, and cultural meaning. Disaster victims often feel a sense of loss in the face of destruction to their urban spaces and landmarks, and disruptions to their rituals, livelihoods, and traditions. Meanwhile, climate change is forcing us to reconsider our individual and collective behaviours. Many of them need to be changed to avoid additional global warming and reduce vulnerabilities. Some traditional means of production and construction, lost under the pressure of current economic systems, must be recovered if these goals are to be reached.

Disasters and climate risks therefore provide an ideal opportunity to examine change. Innovation is needed to avoid replicating the social and environmental injustices that lead to destruction and losses. But some traditions, and consideration for people's attachment to community, territories, and their history, are also crucial to reducing vulnerabilities.

Innovation can help us solve some urgent problems. But many of these problems are caused precisely by rapid disruptive changes. For some, technological innovation is the best answer we have. For others, it is the very cause of the vulnerabilities that need to be reduced.

The "uberization" of labour, and other forms of technological control over production and services, are creating social tension in many countries. The growing power of tech corporations is unsettling governance mechanisms and structures. While we are increasingly dependent on technology, our addiction to disruptive innovation is creating new risks. Globalization and the appeal of new technologies are eroding traditions and challenging social values in both rich and poor nations. Climate change is leading authorities to consider radical relocation of communities at risk. But those directly affected sometimes prefer permanence in their territories and continuity in their livelihoods and ways of living. Neoliberal policy promotes change, but destroys livelihoods and local means of production, while weakening institutions. Worldwide, people are losing a sense of pride in craftsmanship and manual labour.

In sum, we are all struggling with the notion of change. This competition invites students to reflect on the value and risks associated with disruptive transformation. It invites them to assume and explain ethical stances regarding change before or after disasters, in their own cities, countries, or territories.

What must change to reduce vulnerabilities and reduce risk? What must remain? What is the role of innovation after disasters and in climate change action? Why is it important to consider traditions, identity, and rituals when proposing responses to radical change? How can they be preserved?

To answer these questions, it is crucial to identify the actors involved, as well as their wishes, needs, and expectations. Responses must also consider available resources, cultural practices, and local traditions, as well as the immaterial implications of reconstruction. They should propose an approach to reconstruction that is not only physical but also social and relational.



The 10<sup>th</sup> i-Rec international competition invites participants to:

1. Explore ethical approaches to innovation in the aftermath of disasters or in initiatives aimed at reducing risk in the face of global warming.
2. Examine the interaction of complex social, cultural, technological, and economic factors involved in post-disaster reconstruction and/or risk reduction.
3. Examine the role of memory, rituals, and identity in the recovery process.

Examine solutions to disaster-forced displacement of people, reconsidering the importance of design interventions in temporary spaces (and bearing in mind that these often become permanent).

4. Explore how the Covid-19 pandemic, in tandem with social inequalities and neoliberal policies, has exacerbated people's vulnerabilities around the world
5. Explore how urban planning and design interventions can help mitigate the risks posed by climate change, involuntary displacement, and global pandemics (and the interactions between these major threats).
6. Show how architecture and/or urban projects can contribute to the protection of rights and freedoms, especially those of historically marginalized and excluded social groups, in situations of post-disaster reconstruction, recovery, and disaster risk reduction.
7. Examine the technical aspects of physical construction or reconstruction and present a scenario for an organizational design that articulates the stakeholders, their actions, their relationships, their interests, and their resources. The proposal should demonstrate how all these elements are considered in the design.

A selected bibliography is provided below. However, participants are expected to conduct basic research on the subject before preparing their projects. A selection of articles can be found on the i-Rec website:

<http://www.grif.umontreal.ca/i-Rec.htm>.



## suggested content

We expect participants will adopt a variety of methodologies and individual approaches. However, as a reference, the following points may be considered:

### 1. Context

- a. Identify a working scenario. Two scenarios can be studied in the 10<sup>th</sup> i-Rec competition:
  - A recent disaster in a human settlement (in the case of a post-disaster intervention), or
  - A human settlement that is vulnerable to disasters (in the case of a project aiming to prevent the creation of future disaster risks).
- b. Closely examine the context of the human settlement in the reconstruction program or the disaster risk reduction project.
- c. Explore traditional forms of living, mechanisms of adaptation, and patterns of housing and use of space. Identify local housing typologies, settlement patterns, traditional use of closed and open spaces, etc.

### 2. Technological and social approaches to post-disaster reconstruction

- a. Examine **partial or total** reconstruction of houses and/or infrastructure and/or services. This might include examining core housing, transitional sheltering, progressive housing, buildings for mixed use, buildings and infrastructure for income generation, small workshops, etc.
- b. Explore the housing solution from the point of view of the settlement (at a regional, urban, or semi-urban scale). Students might explore a neighbourhood, a formal or an informal settlement (e.g., a slum), a dense urban community or a rural region, among others.
- c. Explore the use of different technologies and compare “innovative” technologies with traditional practices in terms of costs, speed of construction, materials, disaster resistance standards, temporary or permanent solutions, availability of services, social effects, acceptability, etc.

### 3. Organizational approach and logistics



- a. Present an organizational design. Diagram the roles and relationships between stakeholders. Aim to answer the following question: Who does what, where, when, and how?
- b. Explain how the project can contribute to economic recovery, development, livelihood security, and the consolidation of local identity.
- c. Explore how to redistribute and decentralize decision-making power among project stakeholders.
- d. Explore the coordination of local and external resources.
- e. Propose timelines for the development of the project: planning, design, management, financing, training, information, construction, etc.
- f. Explain the logistics and phases required to develop the project (in the short, medium, and long term).

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### submission instructions

Entries must be completed online. Please follow these three steps:

1. Send an expression of interest by email to Mauro Cossu (see details below).
2. Register on the competition website by completing the online registration form.

Prepare an 8-page document explaining your project and save it as a PDF file. This document must include graphic depictions of the proposed technique and a brief text describing the scenario and the organizational design. Organization charts, Pert diagrams, etc., are recommended for the presentation of organizational aspects. If the project is to be developed as an evolutionary process, different stages of the process should be illustrated. Provide a timeline of activities and explain the project lifecycle.

3. Upload the information using the registration form.
  - a. Upload three images: a) one at the architectural scale; b) one at the settlement scale; and c) one of the organizational framework. These images may or may not be included

in the PDF file (as part of the 8-page document). Images must be less than 2MB and in good resolution (more than 72 dpi). Images must be in .jpg format; name your files figure1.jpg, figure2.jpg, and figure3.jpg.

- b. Write, in the area provided, a brief text of 200 words describing the most important elements of the project.
4. Upload the 8-page PDF document. This file must not exceed 3MB. Aim to have the highest resolution that can be obtained within the limit of the file size.

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### document guidelines

The document must be submitted electronically (via the online platform) as a PDF and must meet the requirements listed below.

1. Page format: Letter or A4.
  2. Layout: Landscape (i.e., horizontal). Please note that submissions will only be viewed electronically. PDF files will be examined at a scale of 100%.
  3. Length: A maximum of 8 pages, including all images, text, references, tables, diagrams, etc. The text within the document should not exceed 1000 words.
  4. Margins: Not specified. Students may design their own layout.
  5. Font: Not specified. Students may design their own layout. However, please note that the text must appear at an appropriate, readable size when the PDF file is opened at 100%.
  6. Cover page: Do not use a cover page to identify the authors. Instead, use a label on the first page with the following information: student names, university name, date, and supervisor's name (professor, teacher, or instructor). As a reference, see the label suggested on page 14 of this document.
  7. Language: The text can be in English, Italian, French, Spanish, or Portuguese.
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### schedule

Expression of interest:	Send an email to Mauro Cossu before March 1 <sup>st</sup> , 2022—see details below.
Online registration:	From December 2021 to May 10, 2022
Submission of projects:	From April 10 to May 10, 2022
Selection of prize winners:	During the 10 <sup>th</sup> i-Rec conference in Sendai, Japan, 2022

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### exhibition of projects

Students must follow all instructions for their work to be eligible for the competition. Accepted entries will be permanently exhibited on the competition website. The projects will be shown and discussed during the 2022 i-Rec conference in Sendai, Japan.

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### information

For more information about the student competition, please contact:

**Mauro Cossu**, [mauro.cossu@umontreal.ca](mailto:mauro.cossu@umontreal.ca)

**Gonzalo Lizarralde**, [gonzalo.lizarralde@umontreal.ca](mailto:gonzalo.lizarralde@umontreal.ca)

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### fees

Student participation in the competition is **free**. Student participants are invited to attend the conference-workshop at the reduced registration rate.

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### prizes

During the 10<sup>th</sup> i-Rec conference, a jury of experts will select three projects to be awarded prizes:

- First prize: CAD \$2,000
- Second prize: CAD \$1,000
- Third prize: CAD \$600

The jury's decision will be posted on the competition website.

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### selected bibliography

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## appendix: example of the label to be used in the PDF document

Student names:	University:  Department:	Supervisor name:  Department:	<b>10<sup>th</sup> i-Rec student competition</b>
Emails:	Department postal address:	Supervisor email:	Country:
Telephone number:	Department phone number:	Supervisor phone number:	Date: