



## **CBRI Architecture Competition - Bhartiya Paramparik Awas Uthan Award**

### **(An attempt to rejuvenate Traditional Construction Technologies in India)**

Central Building Research Institute is organizing a competition for **Architecture Students and Institutes** to document traditional houses, both quantitatively and qualitatively, identify their features concerning historical relevance, climatic influence, cultural significance, architectural characteristics, and construction technology, and further propose a few modifications to fit in the modern world considering, thermal comfort, energy, and cost. The modification could be the replacement of building materials used in traditional buildings or adapting any modern technology to traditional buildings to make it feasible in the current context. The institute could include the competition theme as an academic exercise, such as Documentation, Studio, vernacular architecture assignments, etc.

### **About CBRI**

Central Building Research Institute (CBRI), located at Roorkee, Uttarakhand, India, is a constituent establishment of the Council of Scientific and Industrial Research, Government of India, responsible for generating, cultivating, and promoting building science and technology in the country's service. Since its inception in 1947, the Institute has been assisting the building construction and building material industries in finding timely, appropriate, and economical solutions to the problems of building materials, health monitoring and rehabilitation of structures, disaster mitigation, fire safety, and Energy efficient rural and urban housing. The Institute is committed to serving the people through R&D in the development process and maintains linkages at international and national levels.

### **Preface**

Architecture is about erecting buildings with the understanding and embodying the cultural, social, and environmental contexts in which these structures exist. Traditional architecture, in particular, encapsulates the essence of a region's cultural heritage, reflecting its inhabitants' traditions, beliefs, and lifestyles. Traditional knowledge of climate-appropriate construction technologies and materials has evolved for thousands of years within the specific context of diverse ecosystems and dominated local housing. Instead of developing indigenous techniques with the advancement of science and technology, industrialization and urbanization altered building construction into an efficient, industry-oriented approach that could be more responsive to the environment. Globalization has influenced local techniques adversely. Modern construction techniques are easy to build, require less maintenance, and take less construction time, which are the primary reasons for abandoning traditional construction technologies. A mass survey conducted by CBRI, Roorkee, in 2023 in 10 different states covering more than 20 cities found that people living in traditional houses confirms that traditional houses are thermally comfortable and aesthetically pleasing. Yet, they prefer to move to contemporary houses because modern houses are durable, and the building materials to build modern construction are readily available and cheaper than traditional ones. However, modern construction materials are synthetic, climate-inappropriate, and result in a higher carbon footprint. Therefore, advancement in traditional construction technology through a few modern substitutions considering energy, comfort, and cost could efficiently rejuvenate climate-responsible traditional architecture.

Several architects, designers, and climate-related people work in the same direction but on a small scale. There are limited strategies to assess the potential of integrating traditional knowledge with modern structures to reduce the material intensity and embodied energy of the material, enhance thermal comfort and liveability, and reduce environmental impacts. These materials and techniques include wattle and daub, cob-based walls, stone-based walls (random rubble), Bhunga roofs, Kathkuni and Dhajji Diwari structures, and an array of walling and roofing technologies that utilize local materials and local skills to construct houses. Even though official documentation of building materials and techniques has begun, more focused policy framing is needed to promote, support, and fund hybrid and fusion technologies in the housing sector, especially in peri-urban and rural areas.



The Central Building Research Institute (CBRI) has decided to institute awards for precision in the documentation of traditional houses and propose modifications to adopt in the modern context. The "CBRI Bhartiya Paramparik Awas Uthan Award" has been instituted to encourage the new generation of budding architects who understand contemporary construction technology and materials while valuing the inherited heritage of traditional construction technology.

### Objective:

The primary objective of this competition is to encourage architecture students and institutes to explore and document the traditional architectural heritage within their local communities. By engaging in this process, participants will gain a deeper understanding of the cultural significance of these structures while honing their research, documentation, and presentation skills. Participants are tasked with identifying and thoroughly documenting traditional houses in nearby regions. These houses may vary in style, construction techniques, materials, and architectural features, but they should all represent the authentic architectural expression of the local culture. Participants are encouraged to explore a diverse range of traditional houses, including but not limited to traditional cottages, farmhouses, tribal dwellings, and urban heritage homes. Further, it suggests innovative substitution in the traditional construction technology to be adopted in the present scenario considering energy, Comfort, and Cost.

### Documentation Guidelines:

- **Research:** Students should conduct comprehensive research on the **history, climatic influence, cultural significance, architectural characteristics, and construction technology** of the selected traditional house by the participants. This may involve consulting local historians, residents, archival resources, and Online resources.
- **Documentation:** Participants are required to document a **selected house** through a combination of **sketches, photographs, measurements, and written descriptions**. The documentation should capture both the macro and micro aspects of the architecture, including floor plans, elevations, construction details, spatial organization, and decorative elements.
- **Analysis:** Students should critically analyse the architectural features of the traditional houses, considering factors such as **climate responsiveness, sustainability, adaptability, and socio-cultural relevance**. They should also explore the relationship between form and function, as well as the evolution of architectural styles over time.
- **Innovation:** One of the major reasons for preferring Modern houses over Traditional houses is the unavailability of materials or obsolete technology no longer applicable in the modern period. Participants are encouraged to **recognise the gap** apply and to apply their knowledge of modern construction technology and materials as an **innovative substitute to rejuvenate traditional construction technology**.
- **Presentation:** The documentation should be presented in a visually compelling and informative manner. Participants are encouraged to utilize digital tools, multimedia presentations, or physical models to effectively communicate their findings and insights.

### Evaluation Criteria:

Entries will be evaluated based on the following criteria:

- **Depth of Research:** Thoroughness and accuracy of the contextual, architectural, and technological research conducted.
- **Documentation Quality:** Clarity, detail, and creativity in the presentation of documentation materials.
- **Architectural Analysis:** Insightfulness and critical analysis of the architectural characteristics and contextual significance.
- **Innovation:** The innovation and practicality of the substitute to rejuvenate, climate-responsive traditional construction technology considering energy, comfort, and Cost.
- **Presentation Skills:** Effectiveness of the presentation in conveying the essence of the vernacular houses and engaging the audience.



### **Best Institute award**

This award is for the institute supporting and encouraging students by various means to participate in the CBRI Bhartiya Paramparik Awas Uthan Award. The highest number of quality submissions from an institute will be awarded the best institute awards.

### **Eligibility**

The term 'Student' shall mean a Bonafide student of the College of Architecture at the time of registration who is a full-time Architecture Degree program student. The term 'College' shall mean an Institute/college/school/department of architecture recognized by the Council of Architecture. Each documentation project must be submitted with the consent of the Head of the Institute/Principal of the college.

### **Team Constituents:**

- Minimum Two and Maximum of Four students (from any year of B.Arch. and M.Arch. or equivalent) can form a team
- Additionally, it is encouraged (not obligated) to have a faculty member on each team
- Multiple submissions per student/team are allowed with multiple registrations

### **Expected contents of submission:**

- Research and Pitching
  - ❖ Provide an overview of the research conducted on the selected traditional house.
  - ❖ Introduce the cultural context and significance of the chosen architectural heritage.
  - ❖ Include any relevant historical background and contextual information.
- Documentation and Analysis
  - ❖ Present detailed documentation of the traditional house through sketches, photographs, measurements, and written descriptions.
  - ❖ Analyse the selected houses' architectural features, construction techniques, and spatial organization.
  - ❖ Discuss any notable findings or insights derived from the analysis.
- Architectural Drawings and Diagrams
  - ❖ Present architectural drawings such as floor plans, elevations, sections, and details of the traditional house.
  - ❖ Include diagrams or illustrations to illustrate key architectural concepts, spatial relationships, and design elements.
  - ❖ Ensure clarity and accuracy in the presentation of drawings and diagrams.
- Innovative substitution
  - ❖ Justification of innovative substitution on existing traditional construction technology considering energy, comfort, and cost. It could be the replacement of material, use of advanced technology, or any other proposal with proper justification.
- Presentation and Conclusion
  - ❖ Create a visually engaging presentation summarizing the research, documentation, analysis, and findings.
  - ❖ Conclude with reflections on the significance of the vernacular houses and the importance of preserving architectural heritage.
  - ❖ Use this sheet to showcase the team's creativity and presentation skills.
- Design Layout
  - ❖ Maintain a coherent and visually appealing design layout throughout the submission sheets. Pay attention to typography, color schemes, and overall presentation aesthetics.

### Submission Requirements:

Each team participating in the competition must adhere to the following submission requirements:

- **Template:** An editable template for reference is available upon successful registration. The submittal must adhere to the template.
- **Format:** The submission must consist of four sheets of A2 size with all the expected contents for submission. All submission sheets must be in digital format (PDF preferred). The original raw files, such as CAD, Photoshop, Illustrator, etc., must be preserved and submitted to CBRI upon request.
- **Team Code:** Each sheet must prominently display the team code on the top-right corner of the sheet as on the template. The team code will be provided to each participating team upon successful registration and will serve as a unique identifier for their submission.
- **Cover page:** Include a separate cover page or sheet with the following information:
  - ❖ Team Members' Names
  - ❖ Faculty member's name (Optional)
  - ❖ Affiliated Institution or Organization
  - ❖ Contact Information (Email or Phone Number)
- **Submission mode:** A link for digital submission will be shared after the registration end.
- **Letter of Declaration:** Declaring that the participants have not copied in part or whole or otherwise plagiarized the work of others for this submission. Participants also declare that the CBRI may use the entry and its summary for promotions, publications, and future communication. The Letter of Declaration must include the consent of the Head of the Institute/ Principal of the college. The original hard copy of the declaration letter must be preserved until the result is declared.

### Registration:

- Registration is **free** and **mandatory** for participation within the timeline
- Registration through the link provided on the CBRI Official website
- It includes basic information such as team constituents, name, year of study, faculty guide (if any), affiliation (Institute/College/University), etc.
- Details of the house selected for documentation such as climatic zone, major building material, and approximate built-up area of the house, etc.
- Upon successful completion of the registration, CBRI will revert with the Team code and suggestions on the research work if any.

### Registration QR Code:





### Awards and Certificates:

The CBRI (Promoter) undertakes to accept the decisions and awards of the jury. An attractive reward for the winners will be given. Details of the reward will be shared after the registration ends.

- **Students Awards**
  - ❖ **1<sup>st</sup> Prize** (1 Number)  
Per member: Trophy + Certificate + attractive reward
  - ❖ **2<sup>nd</sup> Prize** (2 Numbers)  
Per member: Trophy + Certificate + attractive reward
  - ❖ **3<sup>rd</sup> Prize** (3 Numbers)  
Per member: Trophy + Certificates + attractive reward
- **Institute Awards**
  - ❖ **1<sup>st</sup> Prize**  
Per Institute: Trophy + Certificate + attractive reward
  - ❖ **2<sup>nd</sup> Prize**  
Per Institute: Trophy + Certificate + attractive reward
  - ❖ **3<sup>rd</sup> Prize**  
Per Institute: Trophy + Certificate + attractive reward
- **Honourable mentions**
  - ❖ 50 Honourable mentions for high-quality work (Certificate per member)
  - ❖ 10 teams from each climatic zone - 5 climatic zones as per NBC 2016, (1) Warm-Humid (2) Hot-Humid (3) Cold (4) Temperate (5) Composite

### Jury

Eminent and experienced jury members from academia and the research field will evaluate the submission

### Disqualification

The jury may disqualify entries for the following reasons:

- If the participant disregards any of the conditions of the program
- If the participant attempts to influence any member of the Jury Panel

### Rights

- All material received as an entry will be retained by the organizer as their property.
- Copyright of all projects including the winning projects will be that of the authors of the documentation, however, the organizer will have the right to publish the projects received, in journals and as a compilation of entries received, for records, academic interest, creating an archive, document or compendium.

### Timeline of the Competition

Items	Dates
Official Announcement of Competition	15 <sup>th</sup> April 2024
Registration ends	31 <sup>st</sup> May 2024
Acceptance and suggestion	7 <sup>th</sup> June 2024
Submission Deadline	7 <sup>th</sup> July 2024
Result	30 <sup>th</sup> August 2024
Award Ceremony (World Habitat Day)	7 <sup>th</sup> October 2024