

Green building rating agencies

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In news: VInaugurating the 12th GRIHA (Green Rating for Integrated Habitat Assessment) Summit virtually, organized by the GRIHA Council

About GRIHA (Green Rating for Integrated Habitat Assessment)

- The Energy and Resources Institute(TERI) has developed GRIHA (Green Rating for Integrated Habitat Assessment), which was adopted as the national rating system for green buildings by the Government of India in 2007.
- This tool has been adopted by the Ministry of New and Renewable Energy. This tool, by its qualitative and quantitative assessment criteria, is able to 'rate' a building on the degree of its 'greenness'.
- GRIHA is a rating tool that helps people assesses the performance of their building against certain nationally acceptable benchmarks.
- It evaluates the environmental performance of a building holistically over its entire life cycle, thereby providing a definitive standard for what constitutes a 'green building'.
- The rating system, based on accepted energy and environmental principles, will seek to strike a balance between the established practices and emerging concepts, both national and international.

What is a green building?

- In simple terms, a green building is a building that, in its design, construction or operation, reduces or eliminates negative impacts, and can create positive impacts, on our climate and natural environment.
- Any building can be a green building, whether it's a

home, an office, a school, a hospital, a community centre, or any other type of structure, provided it includes features listed below

Examples of Green Building materials

Green materials are materials that are local and renewable. **Following are the examples of Green Materials:**

Bamboo, Reclaimed Wood, Reclaimed or Recycled Steel, Plant-based Polyurethane Rigid Foam, Rammed Earth, HempCrete, Mycelium, Ferrock, Timbercrete, Terrazzo, Dlite AAC Block, Green AAC Block Block-board Plywood Eco Green GreenAAC Block Ecorex AAC Block

Environmental impact of buildings

As per the World Green Building Council data, buildings and construction account for 39 per cent of energy-related CO2 emissions in the world and called for accelerating the process of total de-carbonization of the built environment.

Features of green building

Following are the features which can make a building green:

- Efficient use of energy, water and other resources
- Use of renewable energy, such as solar energy
- Pollution and waste reduction measures, and the enabling of re-use and recycling
- Good indoor environmental air quality
- Use of materials that are non-toxic, ethical and sustainable
- Consideration of the environment in design, construction and operation
- Consideration of the quality of life of occupants in design, construction and operation
- A design that enables adaptation to a changing environment

Indian green building codes

In India, the Green Building Code is a medley of codes and standards contained in the State by-laws, the National Building Code, the Energy Conservation Building Code (ECBC) and in the norms set by the ratings programmes, such as Leadership in Energy and Environmental Design-India (LEED-India), the standards and guidelines put down for the Residential Sector by the Indian Green Building Council (IGBC), TERI-GRIHA and other such certifications.

Green Building Rating Agencies in India

Green rating systems for buildings measure and quantify the environmental performance of a given building. India currently has the below green rating systems for buildings.

- Green Rating for Integrated Habitat Assessment (GRIHA)
- Leadership in Energy and Environment Design (LEED)
- IGBC rating systems

Indian Green Building Council

The Indian Green Building Council (IGBC), part of the Confederation of Indian Industry (CII) was formed in the year 2001. The vision of the council is, "To enable a sustainable built environment for all and facilitate India to be one of the global leaders in the sustainable built environment by 2025".

The council offers a wide array of services which include developing new green building rating programmes, certification services and green building training programmes. The council also organises Green Building Congress, its annual flagship event on green buildings.

Leadership In Energy And Environment Design (LEED):

LEED (Leadership in Energy and Environmental Design) is the most widely used green building rating system in the world. It

was the Indian Green Business Center (IGBC), under the Confederation of Indian Industries (CII) that facilitated the LEED rating of the United States Green Building Council (USGBC)

LEED India encompasses rating systems for:

- Existing Buildings (EB)
- New Construction (NC)
- Core and Shell (C&S)
- Green Homes