Subject: Environmental Laws and Legislations
Topic: Griha, EIA, Ecbc
Presented by: Ruchi Saxena

GRIHA

GRIHA is an acronym for Green Rating for Integrated Habitat Assessment. GRIHA is a Sanskrit word meaning – 'Abode'. Human Habitats (buildings) interact with the environment in various ways. Throughout their life cycles, from construction to operation and then demolition, they consume resources in the form of energy, water, materials, etc. GRIHA is a rating tool that helps people assesses the performance of their building against certain nationally acceptable benchmarks.

PURPOSE OF GRIHA

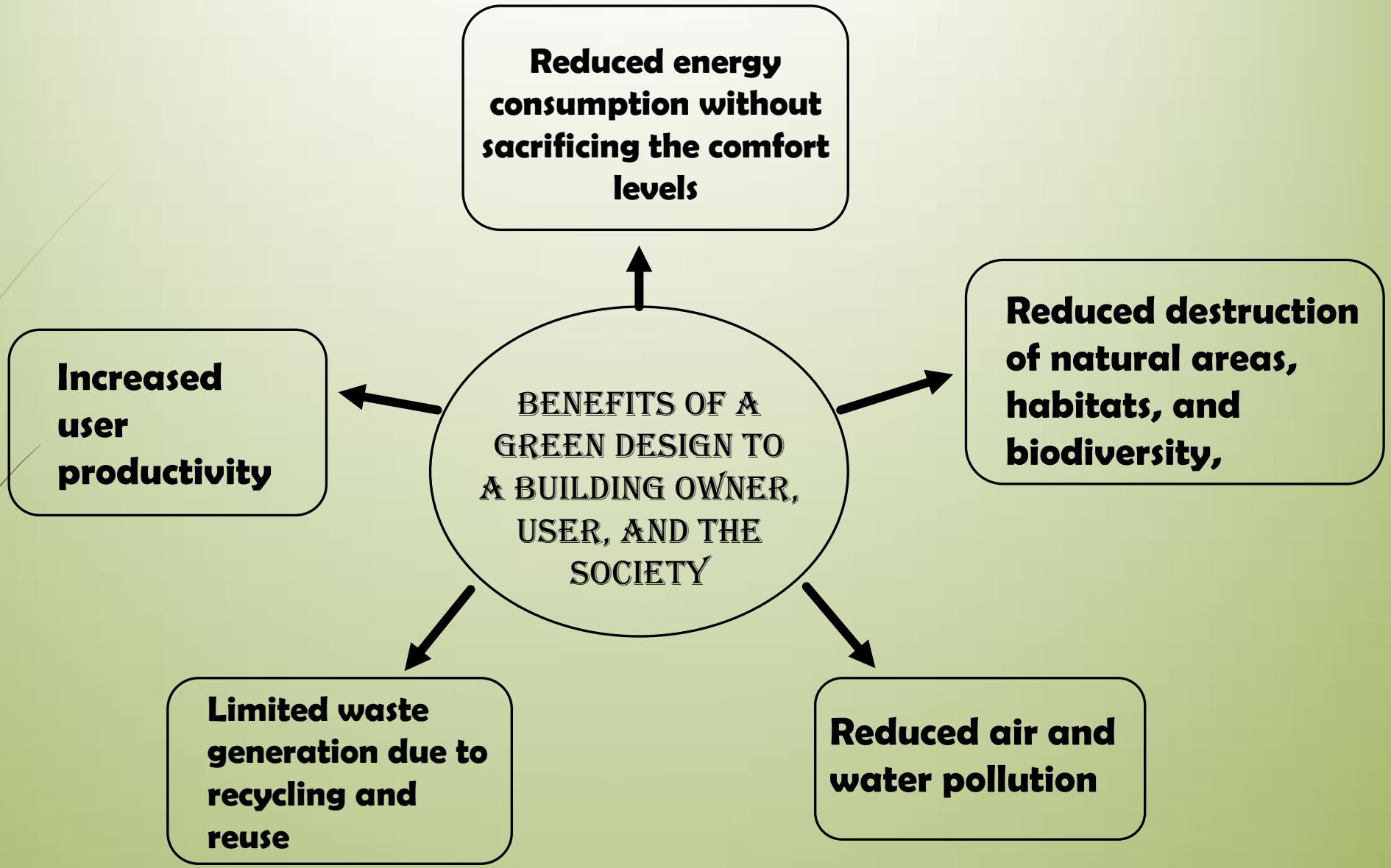
- It evaluates the environmental performance of a building holistically over its entire life cycle, thereby providing a definitive standard for what constitutes a 'green building'.
- Internationally, GRIHA has been recognized as:
- An innovative tool for sustainable development by the United Nations.
- A tool for implementing renewable energy in the building sector
- On a broader scale, this system, along with the activities and processes that lead up to it, will benefit the community at large with the improvement in the environment by reducing GHG (greenhouse gas) emissions, reducing energy consumption and the stress on natural resources.

➢ THE CHALLENGES

The Indian building industry is highly de-centralized with people and/ or groups engaged in design, construction, equipment provision, installation, and renovation working together. Each group may be organized to some extent, but there is limited interaction among the groups, thus disabling the integrated green design and application process.
Hence, it is very important to define and quantify sustainable building practices and their benefits

➢ RATING SYSTEM

GRIHA rating system consists of 34 criteria categorized under various sections such as Site Selection and Site Planning, Conservation and efficient utilization of resources, Building operation and maintenance, and Innovation points. Eight of these 34 criteria are mandatory, four are partly mandatory, while the rest are optional. Each criterion has a number of points assigned to it. It means that a project intending to meet the criterion would qualify for the points. The minimum points required for certification is 50


Reduced energy consumption without sacrificing the comfort levels
Increased user productivity
BENEFITS OF A GREEN DESIGN TO A BUILDING OWNER, USER, AND THE SOCIETY
Reduced destruction of natural areas, habitats, and biodiversity,
Limited waste generation due to recycling and reuse
Reduced air and water pollution

ENVIRONMENTAL IMPACT ASSESSMENT

It is intended as an instrument of preventive environmental management. It provides a framework and an information basis for decision making on activities affecting the environment.as a procedure, it provides a prototypical example of a practical application of geomatics in a well defined regulatory framework.

➢ The philosophy:

- **Impact assessment is designed as a preventive measure.**
- **It should give environmental considerations equal weight with technical and economic aspects.**
- **Environmental considerations should be introduced early on in the planning processes.**
- **Broad and public participation should ensure wide acceptance of projects implemented.**

➢ PURPOSE:

The purpose of the assessment is to ensure that decision-makers consider environmental impacts before deciding whether to proceed with new projects.

THE ENVIRONMENTAL IMPACT ASSESSMENT PROCCESS

- MAJOR STEPS IN EIA PROCESS ARE-
- SCREENING
- INITIAL ENVIRONMENTAL EXAMINATION (IEE)
- SCOPING
- FULL SCALE ASSESSMENT
- EIA REVIEW AND DECISION MAKING
- MONITORING AND FOLLOW UP

ECBC

The Energy Conservation Building Code (ECBC), was launched by Ministry of Power, Government of India in May 2007, as a first step towards promoting energy efficiency in the building sector.

➢THE ECBC PROVIDES DESIGN NORMS FOR:

- **Building envelope, including thermal performance requirements for walls, roofs, and windows;**
- **Lighting system, including daylighting, and lamps and luminaire performance requirements;**
- **HVAC system, including energy performance of chillers and air distribution systems;**
- **Electrical system; and**
- **Water heating and pumping systems, including requirements for solar hot-water systems.**

➢ THE CODE PROVIDES THREE OPTIONS FOR COMPLIANCE:

- **Compliance with the performance requirements for each subsystem and system;**
- **Compliance with the performance requirements of each system, but with tradeoffs between subsystems; and**
- **Building-level performance compliance.**