

Green Building Professional Network in India

India is reaching a critical tipping point in terms of its environmental degradation. Everyday we read and hear about the need to manage our resources well in order to reduce the overall burden on our environment. However, a little is being done on ground to actually bring a change. Even after the introduction of green building rating programs, efficient appliance rating programs, policy instruments to deliver green, incentives and awareness programs, the situation is becoming even more alarming. This only raises concerns over the effectiveness of these systems to steer the focus towards reducing impact and increasing efficiency. Does this mean that the systems are hollow? Or that the stakeholders are non-receptive? Well the current situation certainly hints at both factors equally.

To look at it from a different perspective, how many of us know about the impact of our day to day activities on the environment? As children how many of us were taught to preserve the environment, travel by public transport, reuse the waste we generate, save water or switch off lights and fans while leaving the room? Well, while some of us were taught a few things out of all listed above, most of the children, in their growing years, are not educated or made aware of these little responsibilities in their day to day activities. Why do you think this happens? Maybe because as individuals we take these resources for granted? If we do not get enough water or electricity supply we tend to complain but when it comes to preserving these resources we simply turn a blind eye. This is nothing more than cleaning your own house and throwing the litter in front of others door.

As educated, civilized and responsible citizens we must understand the importance of saving these resources. It is just like earning 100 bucks and saving atleast 50% for the future. If we demand 'x' litres of water a day we must save atleast 50% for future! This is the simplest way in which we can understand the importance and responsibility towards environment.

If we discuss it in a more focused direction, professionals who have spent time, money and energy in learning these principles to contribute towards saving the environment are more bound to act responsibly. They are the ones who must practice their learning's and spread the word around to provide solutions. Just as a banker fulfils his responsibilities by managing your money well or like a doctor who is expected to give you the best treatment without any side effects, it is the key responsibility of a building industry professional to provide best designs with minimum impact. Then why are building professionals allowed to deviate? Why so many grace marks? Why do architects and designers give us illogical designs? How do developers escape from their responsibility of ensuring a resource efficient project?

The blame for this may be shared by our education systems also. The way young professionals are taught now-a-days is way different and casual than the way other professional students are. This again has its own reasons of incompetent staff, lack of skilled faculty, huge funding and political interventions. So basically the mess begins right at home where a growing child is not given the basic environmental education and it trickles down to the educational institutions, graduation colleges and finally the professional industry.

With growing awareness of the already 'created' crisis and impact of our actions on the environment, individuals and independent institutions are now coming up with solutions to reform the wrong that has been done and introduce new guidelines for ensuring the right action in future. Some of these institutions provide integrated solutions while some of them target specific industry sections such as efficient water management or energy efficiency solutions or waste management or transport efficiency solutions. Broadly the key objectives of these institutions are to:

1. Create awareness about efficient buildings among all stakeholders
2. Train professionals to design, construct and operate green buildings
3. Provide opportunity to play an active role in the advocacy of green/efficient buildings
4. Provide a platform for networking and business development

While the intent of these networking groups remains meaningful, the on-ground effectiveness lacks. The focus seems to have gradually shifted from reforming the industry to a more commercialized platform for generating numbers and funds. Institutions organize training programs, conduct certification exams and finally produce a mass number of 'green certified professionals'. Certifying an individual as a green building professional signifies that the individual is responsible and qualified enough to contribute effectively and take the green movement forward. Unfortunately, in reality, it only adds a certificate to the list of qualifications held by the individual and the main intent remains unfulfilled.

Similarly, the whole idea of organizing green building summits and conferences is defeated if the program only focuses on inviting Ministers, famous delegations and obliging key professionals rather than discussing critical issues and providing immediate solutions. Big expensive energy guzzling venues, high profile speakers who continue to design illogical buildings, bollywood stars to attract audience, extensive use of conference paper stationary and plastic, inviting professionals from different countries who have no idea about Indian conditions and design requirements, spending crores on business class air tickets and calling it green and resource efficient. Further more, the focus of the sessions remain on introducing expensive imported efficient equipments and materials to reduce energy consumption rather than highlighting the importance of designing green and reducing demand. And finally, by the end of the whole summit, individuals only take back a few business cards, make some business deals and continue using resources day and night. If we try to carry out an overall impact assessment of such a "green summit", we will hang our heads in shame for misleading the nation in the name of creating awareness.

It is time that we start realizing the simple means of following our ancestral architects who designed buildings for humans and not for expensive efficient equipments, which only repair the damage done by an irresponsible and casual design. The current situation demands an immediate solution. It emphasizes the need for an honest, responsible and focus driven approach towards creating awareness among all sections of the Indian society. Students, individuals, professionals, activists, Government, service providers, developers, and manufacturers must all be made aware of the seriousness of the crisis and only then can we expect a change to happen.

The existing green building professional networks in India majorly comprises of three key institutions, CII (Confederation of Indian Industry), ADaRSH (Association for Development and Research of Sustainable Habitats) and USGBC (US Green Building Council).

CII

The Confederation of Indian Industry (CII) works to together with industry, Government, and civil society, through advisory and consultative processes to create and sustain an environment conducive to the development of India. CII is a non-government, not-for-profit, industry-led and industry-managed organization. Founded in 1895, the association has over 7200 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 100,000 enterprises.¹

Nature of activities

- a. Specialized Services Division** - provides solutions to organizations for their competitiveness needs and also helps them become more self reliant by assisting them develop flexible strategies that cater to changing needs.
- b. Corporate Services Group** - assists companies in maximizing corporate and shareholder value through a range of activities covering: Consulting, Research Projects, Knowledge Based Events and Research Papers.
- c. Energy Management Division** - provides expertise to domestic as well as overseas organizations. The range of services offered includes: comprehensive energy audits, in-house and centre-wise intensive training programs, specific energy consumption norms, 'Energy Conservation (Encon)' missions and international conferences / exhibitions on trends in energy efficiency.
- d. Environment Management Division** - facilitates the utilization of national and international expertise through seminars, workshops and training programs. It undertakes a wide range of programs & awareness activities covering legal and technical aspects including design and implementation of Environment Management systems as per ISO 14001, OHSAS 18001 and SA 8000. Pollution Prevention and Waste Minimization Initiatives, Green Supply Chain Management, Environmental Performance Evaluation, Strategic Environmental Assessment, Sustainable Development and Environmental Planning, Hazardous Waste Management, Site Feasibility Assessment etc. are some of the other services offered.
- e. Green Services Division** - operates through the Green Business Centre (CII-GBC), offering Green Services to Indian industry. The objective of the CII-GBC is to promote Green Concepts leading to sustainable development, efficiency and equitable growth. Services offered include: Green Process Certification, Green Building Certification, Technology Centers, and Training Programs on Green related topics and business incubation.

¹ <http://www.greenbusinesscentre.com/site/ciigbc/aboutus.jsp>

- f. **Technology Services Division** - offers the following services to members: Technology Audit, Technology Export, technology transfer and problem solving skills from R&D and academic institutions (through CII TDB Technology Transfer Centers).
- g. **Total Quality Management Division** - provides a comprehensive range of services to members: multi-client training and awareness programs, in-company training, individual company counseling and advisory services, seminars and focused missions within India and overseas to study and share best practices.

IGBC

To enable a sustainable built environment for all and facilitate India to be one of the global leaders in sustainable built environment by 2025, CII launched IGBC (The Indian Green Building Council). The Indian Green Building Council (IGBC), part of Confederation of Indian Industry (CII) was formed in the year 2001. The vision of the council was to usher in a green building movement in India and facilitate India to become one of the global leaders in green buildings by 2010. However, as of today, IGBC's green footprint is only 2.13 Billion sq ft which is less than 1% of the total building footprint of India. Not only is the green to total footprint ratio skewed, the credibility of certifying 2.13 Billion sq ft as 'green' is also questionable.

1. IGBC AP

The 'Indian Green Building Council Accredited Professional Examination' (IGBC AP) offered by the IGBC is a credential for professionals to participate in IGBC green building projects. The IGBC AP exam is administered by IGBC and can be given at any of the Meritrac online test centers around the country.

The examination is not based on any specific rating system. It is designed to test the knowledge of a candidate on green building design and construction. Qualified individuals can be involved in projects registered under the 'IGBC rating programs' like IGBC Green Homes, IGBC Factory buildings, IGBC Existing Buildings etc., Projects. If an IGBC AP is a part of the project team for IGBC green rating project one credit point under 'Innovation and Design' category is awarded. All students/ professionals of the building industry are eligible to appear for this examination. The validity of the IGBC AP certification is 2 years.

2. IGBC Membership

IGBC also offers an opportunity to join the green building movement through membership. The membership is open to all stakeholders involved in building industry. It offers the following benefits to the members:

- a. Access to Information on rated green building projects
- b. Platform for networking
- c. Opportunity to play an active role in the advocacy of green buildings

- d. Participation in local chapter activities
- e. Special discounts for IGBC programs and publications

The membership is open to Corporate Builders and Developers, Firms (Architects, interior Designers, and Service Consultants), Materials and equipment manufacturers, Institutions, Government Bodies, Nodal Agencies, Material and equipment manufacturers.

ADaRSH

ADaRSH, Association for Development and Research of Sustainable Habitats, is mandated to promote development of buildings and habitats in India through GRIHA. It was founded by TERI (The Energy and Resources Institute, New Delhi) with support from MNRE (Ministry of New and Renewable Energy, Government of India) along with a handful of experts in the sustainability of built environment from across the country.

Key activities of ADaRSH are:

- i. Green building rating (GRIHA, SVAGRIHA, GRIHA LD, GRIHA for schools)
- ii. Capacity building : Training programs, awareness programs
- iii. Advocacy : National Conference and Media reporting

1. ADaRSH Associate Members

ADaRSH (Association for Development and Research of Sustainable Habitats) offers membership opportunities to various individual and collective stakeholder groups that are associated with the building industry namely developers, contractors, designers, engineers, consultants, product manufacturers, students, or the general public.

2. GRIHA Patrons

GRIHA Patrons are proactive members of the GRIHA community who have been instrumental in adoption of GRIHA in various parts of the country. They represent GRIHA in different regions.

3. GRIHA Trainer and GRIHA Evaluator

GRIHA (Green Ratings for Integrated Habitat Assessment) Trainer & Evaluator is administered by ADARSH.

The GRIHA Trainer credential provides an opportunity to conduct training services for people interested in learning the rating system. A GRIHA certified trainer is expected to be aware of all 34 criteria in GRIHA Rating system. One has to attend the 3-day GRIHA Evaluators and Trainers program to appear for the exams.

Subject experts and professionals who have qualified the GRIHA exam for Evaluators are engaged with assessment of GRIHA project documentation. GRIHA Evaluators are

instrumental in ensuring third party and credible assessment of GRIHA compliant projects. Professionals can appear for any one of the five expertise exams –

- Architect with expertise in passive design
- Energy Analyst
- Plumbing Expert
- Public Health Engineer (PHE)
- Landscape Architect

USGBC - LEED

The LEED Professional Exams are administered by the Green Building Certification Institute (GBCI) for professionals seeking to earn credentials and certificates. The exams test knowledge based on the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating Systems.

The LEED Professional Credentials were developed to encourage green building professionals to maintain and advance their knowledge and expertise. A LEED Professional Credential provides employers, policymakers, and other stakeholders with assurances of an individual's current level of competence and is the mark of the most qualified, educated, and influential green building professionals in the marketplace.² All LEED Professional Credentials require adherence to the LEED Professional Disciplinary and Exam Appeals Policy and require ongoing credential maintenance requirements either through continuing education and practical experience or through biennial retesting. Starting in 2009, newly credentialed individuals must maintain their credential on a two-year cycles; if not, they expire. There are three tiers in the LEED Professional Credentialing program:

- a. Tier 1: LEED Green Associate
- b. Tier 2: LEED AP with specialty
- c. Tier 3: LEED Fellow

Additionally, the LEED AP exam was offered from 2001 to June 30, 2009. This credential has been grandfathered in, does not require credential maintenance, and does not expire.

a. LEED Green Associate

For professionals who want to demonstrate green building expertise in non-technical fields of practice, GBCI has created the LEED Green Associate credential, which denotes basic knowledge of green design, construction, and operations.

The eligibility requirements for the LEED Green Associate exam no longer require candidates to have experience in the form of EITHER documented involvement on a LEED-registered project OR employment (or previous employment) in a sustainable field of work

² <http://www.usgbc.org/leed/credentials>

OR engagement in (or completion of) an education program that addresses green building principles. Candidates are still required to agree to the Disciplinary and Exam Appeals Policy and Credential Maintenance Program and submit to an application audit.

b. LEED AP

The LEED AP credential signifies an advanced depth of knowledge in green building practices; it also reflects the ability to specialize in a particular LEED Rating System. The LEED AP exam is divided into two parts. The first part is the LEED Green Associate exam, which demonstrates general knowledge of green building practices. The second part is a specialty exam based on one of the LEED Reference Guides.

The specialties are:

- LEED AP Building Design + Construction
- LEED AP Homes
- LEED AP Interior Design + Construction
- LEED AP Neighborhood Development
- LEED AP Operations + Maintenance

The eligibility requirements for the LEED AP exams are to have documented professional experience on a LEED project, within the last 3 years, with verification through LEED Online or employer attestation. Candidates are also required to agree to the Disciplinary and Exam Appeals Policy and Credential Maintenance Program and submit to an application audit.

c. LEED Fellow

LEED Fellows are a highly accomplished class of individuals nominated by their peers and distinguished by a minimum of 10 or more years of professional green building experience. LEED Fellows must also have achieved a LEED AP with specialty credential.

How active are these professional networks?

CSE conducted a small survey to understand the objective of these networks and the defined role of each certified professional – GRIHA or IGBC LEED. While the results were a little positive for IGBC LEED, they were however worry-some for GRIHA. GRIHA being projected and adopted as a better rating system is unable to reach to its members when it comes to reality.

Let's take a look at the numbers.

Rating system	Certified Professionals
ADaRSH (GRIHA)	19 Associate members, 7 GRIHA Patrons,

	403 GRIHA Evaluators, 350 GRIHA Trainers
IGBC (LEED)	1288 IGBC AP, 1829 Members

GRIHA Trainers and Evaluators are professionals who qualify the examination after a 3-days long training program on GRIHA rating system. While GRIHA Trainers have an overall knowledge of all criteria in the rating system, GRIHA evaluators are sector experts who evaluate the sector specific compliance documents submitted by projects seeking GRIHA rating. This ensures a third party evaluation of documents and improves the credibility of the system. However, if we analyze the educational background and relevant professional experience of GRIHA certified trainers and evaluators, one might have to think about the level of critical evaluation that the project must have undergone. But ADaRSH ensures this gap by evaluating documents at their end too. The problem remains with IGBC too. Both IGBC and ADaRSH do not clearly specify the eligibility requirements to appear for such professional certification exam on their website or any other platform. Professionals with as less as a years experience and those with a good 20 years experience can both be certified as a green building professionals if they manage to absorb the training program content. How fair is it to hand over a 'green rating' responsibility to a graduate with a year's experience? Or if the rating bodies argue against such an evaluation then why certify someone who is not eligible for a credible evaluation? Is it only to increase numbers? Or increase funds? Or does it only exist to invite and please people with a single sheet of paper which has no credibility? A professional who has not yet absorbed the meaning of architecture, or the sense to design buildings on ground or understood the technicalities of lighting and HVAC systems or used passive strategies to improve the performance of buildings is certified as a 'green building trainer'. Is this some kind of a joke? The GRIHA website clearly says that 'The GRIHA Trainer credential provides an opportunity to conduct training services for people interested in learning the rating system'.

While the above discussion is about the credibility of these certifications, an even more disturbing reality is the actual role of these professionals in the green building movement. More than 95% of these individuals have never been contacted by ADaRSH (GRIHA secretariat) after being certified as GRIHA Trainers or Evaluators. The GRIHA E&T Programs started back in 2009. However, there are still a huge majority of professionals who never got an opportunity to fulfill their role as a certified GRIHA professional and the numbers are only increasing every year. When contacted, some of the professionals complained that it is only a fixed set of professionals who are involved in evaluation and training programs. Unfortunately, GRIHA certification for green building professionals is only a way to bring more people to the training programs and increase their community of stamped professionals. "GRIHA says that we will contact you on rotational basis for an upcoming project in your region. I have been waiting for 3 years. Now my certification has expired", says a GRIHA certified professional who does not want to be named. "I never heard back from GRIHA" says Aditi Gupta, who had to wait for almost 1 year to appear for a GRIHA Evaluator exam in Bangalore. There are many more who only add to the list of disappointed and unsatisfied followers of GRIHA. "The only way we feel connected is through e-mailers", says another GRIHA certified professional.

IGBC certification called IGBC AP is designed to test the knowledge of a candidate on green building design and construction. Qualified individuals can be involved in projects registered under the 'IGBC rating programs' like IGBC Green Homes, IGBC Factory buildings, IGBC Existing Buildings etc. Alternatively, if an IGBC AP is a part of the project team for IGBC green rating project, one credit point under 'Innovation and Design' category is awarded. This again sounds like a bargain system. We will give you certified professionals and you can hire one for your projects and get an extra point. So basically, IGBC gets the cake which is the project and the icing too which unfortunately is a hopeful professional.

However, when we analyzed the satisfaction level of these certified individuals, the statistics were surprising. Around 80% of the contacted IGBC certified professionals are happy with the system and are proud to be tagged as an IGBC AP. This certainly owes to the big number of projects, more visibility and more exposure. But apart from these cookies, what is working wonders for IGBC is the initiative to involve these certified professionals in their upcoming endeavors. Even if it is only about contacting them on regular basis or by sending a weekly emailer! Mr. Chetan Bhoj, GRIHA Trainer & Evaluator, IGBC AP says “IGBC certification has helped me as I can do more LEED projects now. IGBC also involves us in revision of manuals and guidelines before releasing it in the market. They send us a weekly email on the latest updates and organize various meetings to keep us involved. But GRIHA never contacted me”. Chetan is working as an energy analyst with 6 years of relevant experience and an MBA in energy management. “I am involved in developing and revising the codes for NC, CS, Metro, school ratings for LEED”, says Avinaash Kummar from SGS who is a certified LEED AP BD+C & IGBC AP, GRIHA Evaluator.

Let us now look at the members of these rating bodies. IGBC has over 1829 members while ADaRSH has a surprisingly low number of 19 Associate members.

IGBC membership is open to all stakeholders involved in construction activities³. Membership provides access to IGBC resources, platform for networking, opportunity to play an active role in the advocacy of green buildings, participation in local chapter activities and offers special discounts for IGBC programs and publications. To become a member of IGBC one has to pay a non refundable fee ranging from INR 2500 to INR 20000 annually depending on the nature of organization. One can also pay INR 500000 and become a founding member of IGBC. So basically you need not be the key person involved during the evolution of IGBC but the position can be bought by paying a hefty sum. This is why IGBC has 123 founding members. IGBC also has the right to discontinue membership of any organization at any time, without prior information. When we analyze the whole system it is understood that IGBC gets more members, gains acceptance and visibility and benefits financially.

ADaRSH Associate membership is open for developers, contractors, designers, engineers, consultants, product manufacturers, students and the general public. ADaRSH Associate members, also known as ‘Developers of a Green Nation’, have to pay a one time fee of INR

³ <http://igbc.in/site/igbc/membership.jsp?mship=23135>

250000 plus 12.36% service tax and it remains same for any type of organization. The membership can be renewed every 2 years by paying a renewal fee of INR 10000 plus 12.36% service tax. The membership fee for students has not been mentioned on the website and is believed to be much lower than the former. With only 19 members in its community, ADaRSH prefers to restrict the membership by not certifying manufacturers or suppliers as ADaRSH members and lists them under the "Product Catalogue". The GRIHA Product Catalogue is an online product catalogue which has been developed to provide green building designers and clients with all necessary information on green building products which can be used in order to make buildings GRIHA compliant. However, ADaRSH does not endorse the product or guarantee the credibility of the information provided by the manufacturer.

Apart from this GRIHA Patrons are an integral part of the GRIHA community. GRIHA patrons are proactive members who have been instrumental in adoption of GRIHA in various regions of India. Mr. Anurag Bajpai, Head of Sustainability Division at GreenTree Building Energy Pvt. Ltd. has been actively involved in various GRIHA rating project consultancy and is now an active member of the GRIHA community as well.

Both, IGBC and ADaRSH, also organize annual and regional summits/conferences to bring together various stakeholders of the building industry on a knowledge sharing platform. The agenda broadly focuses on the key issues of energy, water, waste, materials and efficient technologies in sustainable buildings. It begins with an extravagant inauguration by high profile Government Ministers, Diplomats, CEOs and other special guests. While the sessions are carefully designed to highlight the current scenario and provide effective solutions, the maximum effort and time is spent on inviting the members for the inaugural session. The main focus remains on inviting key professionals who have big names in the industry as well as oblige representatives of entire category of sponsors. Those who pay more money get more visibility in the summit. While this is lucrative for inviting more sponsors and bring more money but also makes the relevant content weak. As a result the sessions start turning out to be money driven rather than content driven! Delegates end up paying high registration fee and are left with short moments of pleasant interactions or picture opportunities with these high profile speakers. What happens next? How does this change the current situation?

All these facts question the whole idea behind the system of organizing these programs in the name of capacity building and creating awareness on green buildings? What is the credibility of these programs and certifications? Why will someone, who travels miles to attend an expensive training program, even bother to come back if what he gets is a mere piece of paper with big hopes and zero results? We need to re-think and understand the need for a system which indulges in sharing knowledge and leads the green building movement in true spirits apart from providing platforms for networking and capacity building.

An ideal green building professional network:

- Must understand the needs of the society – Programs should be sector specific and must be designed for all aspects of a green building. (Cost, material, design, energy, water, waste, implementation, maintenance, audits, land, real estate)

- Realize the enthusiasm of the members – provide opportunities to individuals and exploit their potential in offering solutions
- Knowledge sharing – Periodical updates, meetings, programs, field visits to keep the members involved
- Define clear role of members – to assign responsibilities and benefit from the varied interest and expertise
- Continuous gap analysis and reforms – The network must ensure a critical self evaluation to fill existing gaps and bring out positive reforms
- Member driven – The network must provide due recognition to the members

Why CSE should set-up a green buildings professional network:

Existing networks by IGBC and ADaRSH are centered around their respective green building rating systems and work as business promotion model. There is a need for a professional network which can foster both philosophical and technical debate/ knowledge sharing on greening building sector of India. CSE is well poised to develop and anchor this network as it has long served as an environment watchdog for India and has experience of bringing together all stakeholders for building constructive dialogue and pushing forward sustainability roadmap.

CSE should start the network by building on its existing data base of resource persons. Architects practicing sustainable architecture should be the first set of professionals to be approached, followed by energy and other building services consultants along with real estate developers. Network can later be expanded to include building materials and appliances manufacturers and retailers. Network should also work towards incorporating construction and housing financing professionals. This will foster a cross disciplinary exchange of ideas addressing all aspects of a green building. (Cost, material, design, energy, water, waste, implementation, maintenance, audits, land, real estate).

Initially an online platform should be set-up to facilitate interaction of network members. The online platform can also be used as knowledge sharing platform. Once the online platform has reached a substantial membership, a network meeting should be convened where details of organization and functioning can be discussed and formalized.