Our DNA
Complete Profitability

Building a Sustainable Environment

Working towards the growth, the Environment pillar of Complete Profitability helps integrate ESG and Sustainable development within the IIFL Home Finance ecosystem. As a responsible organization, we have taken upon ourselves to redefine our business model by spearheading Green Affordable Housing, in the hope of starting a revolution across the country.

Team ESG

Our vision to create a path for sustainable world starts with a team that believes and works for sustainability. We brought together a team that identifies, measures and drives our company’s growth in line with the Environmental, Social, and Governance (ESG). ‘Team ESG’ creates an enterprise value accompanied with sustainability goals.

Ajay Jaiswal
Head ESG

Amor Kool
Head - GVP Programme
ESG Lead (Technical)

Amayraa Yadav
ESG Lead
Finance & Initiatives

Tapasya Sharma
ESG Analyst
We often come across the term ‘Green Home’, but what exactly a green home means and how does it benefit us? Let’s simplify this to understand the overall benefits of ‘Green Housing’. Think of India as a country, standing at the cusp of urban landscape transformation with an estimated construction of 11 million homes by 2022. By only imagining that these homes will be built using conventional building techniques, an estimated fresh water consumption of 24x10^6 million litre per year, energy consumption of 21 million units per year and massive CO₂ emission of 17 million tonnes per year will be recorded.

How can we change this? Green Affordable Housing! A large chunk of affordable homes are slated to be part of India’s urban transformation. Therefore, it would not be wrong to call ‘Green Affordable Housing’, the alternate face of India’s mission of ‘Housing for All by 2022’. Green homes ensure sustainable development of our environment, and what better way to blend the benefits of green buildings with affordable housing segment in India.
ˈKUTUMBː An Initiative Towards Green Affordable Housing’ is a unique platform for encouraging Green Affordable Housing in India. With its four chapters held in the cities of Ahmedabad, Indore, Pune, and Bangalore. We have successfully managed to bring together a global diaspora of leaders and professionals to share expertise and views on the need of green affordable housing in the country.

The recently held Kutumb, Chapter IV in Bangalore was joined by International Finance Corporation (IFC), CDC - a UK sovereign fund, IIT Madras, Energy Efficiency Services Limited (EESL), Indian Green Building Council (IGBC), and Ashok B Lall Architects. With more than 120 developers and 7 prominent speakers from global institutions, we managed to turn ‘KUTUMBː An Initiative towards GREEN AFFORDABLE HOUSING’ into a platform where you can join us to contribute towards Green Affordable Housing from Conception to Certification, as well as Finance. The highlight of the event was Padma Shri Saalumarada Thimmakka, affectionately called Vriksha Mata. She is well known for her work in planting more than 8,000 trees in the state and becoming a beacon of environment movement in the state.

Backed by our strong knowledge of working in the field of Credit Linked Subsidy disbursal under Pradhan Mantri Awas Yojana (PMAY), our network in affordable housing segment remains ever strong. This has led us to successfully enlighten and educate more than 120 developers working in affordable housing segment to the benefits associated with green buildings. Some of the brightest minds in global green housing and sustainable living joined us as speakers for the event.

Part of the esteemed panel of speakers at the event included V Suresh (IGBC), Ashok B. Lall (Principal, Ashok B Lall Architects), Rajkumar Rakhra (EESL), Dr A Meher Prasad (IIT Madras), Spondon Bhagowati (IFC), Ushnish Ghosh (CDC) and Monu Ratra (CEO, IIFL Home Finance Ltd.).

Our journey does not stop here, our vision is to create awareness and capacity of Green Affordable Homes in India in the next 4 years (by 2022). We are excited to bring this change with the support from our partners and investors with an aim to finance a staggering 50,000 Green Affordable Homes in the next 2 years.
Green Talks

V Suresh
Chairman
Indian Green Building Council
- Many alternate options for materials and methods of construction have emerged with savings ranging from 10% to 40% against conventional options
- Green is not just for the rich, affluent and middle income, it is equally applicable and may be more to economically weaker sections/lower income groups
- India’s population is increasing at the rate of 2 crore people per year. For 5000 years till 1947 our population was 32 crores, in the next 20 years it went up by 40 crore
- The biggest challenge today is to use cost effective technology in building construction that supports sustainability
- Developed countries will shrink their population by 2050 whereas developing countries including India are expected to touch 8.2 billion mark
- This population will put pressure on existing water, energy and other resources
- By 2030, 9 crore homes are needed in India
- Cost of building construction is 50% higher than the current rate of inflation

Raj Kumar Rakhra
National Programme Manager - UJALA
Energy Efficiency Service Ltd.
- EESL designed energy efficient air-conditioners that save up to 40% electricity in comparison to conventional air conditioners
- Energy efficient appliances constitute a huge role in affordable housing programs
- Once cities, towns & villages get electrified, people living in these areas will have aspirations to consume this facility in some form or the other
- Consumers will use energy inefficient appliances and thus increase energy consumption
- Improvement in quality of life of households through visual comfort, thermal comfort, and others, through lesser energy consumption in domestic category would reduce cross-subsidy/direct subsidy, if any
- Effective usage of surplus electricity in a state
- Lesser consumption means lesser electricity bill, which would enhance willingness to pay thereby reduction in AT&C losses
- Promoting energy efficiency for India’s energy security
- Reduced AT&C losses would allow DISCOMs to improve reliability & quality of supply
- Energy efficient appliances can save 1000 units per home, annually
**Kutumb - An initiative towards GREEN AFFORDABLE HOUSING**

**Green Talks**

**Ashok B. Lall**
Principal
Ashok B Lall Architects

- Sustainable opportunities in collective living are not accessible to people who build a house on their plot of land
- Tall buildings are unaffordable to build, maintain and live-in
- 60% of population is unable to afford homes in taller buildings as the cost is more. While 80% of the people can afford homes in 3-4-5 storey building as they are more economical
- As you go taller with the height of the building - more steel is used and CO2 emission is higher
- 60% of energy used in production of building attributes to use of steel
- Current average of steel used in building stands at 35kg/m2 but if buildings are kept at 4-5 storeys then this could be reduced to 25kg/m2
- 60% of electricity bill in middle class families comprises of energy consumed by air-conditioners
- 4 or 5 storey building saves 30% embodied energy as compared to an 8 storey building
- 4 or 5 storey building saves 20% more operational energy than a tall building
- 4 storey building just clears the tree line and its terrace can be used to install solar photo voltaic panels
- 85% of annual electricity demand in a 4-5 storey building can be met completely with solar photo voltaic
- Thermal insulation of roof costs only 0.5% of the construction cost but reduces overall operational cost
- For East-West facing homes, plant a tree to the left of house as it works as a curtain during sunset & sunrise
- For North-South facing home, plant a tree to the right as it works like an umbrella covering the house
- Sharing the cost of infrastructure alone is not possible, but 200 homes together can reuse & recycle resources to become a green affordable housing project

**Ushnisha Ghosh**
Chief of Staff
CDC Group

- Climate & weather will be the top 5 risks for businesses in the next 10 years accounting for 0.4% to 0.5% loss in global GDP
- India is a huge market keeping in mind the rapid urbanization & growth of construction
- There is a need to closely embed ESG initiatives among the companies
- Responsible investing should be made in companies who champion green initiatives
Dr. A Meher Prasad  
Professor  
IIT Madras  

- Promoting the use of Aluminum form system - MIVAN  
- MIVAN form of construction is light weight, easy to handle & utilizes semi-skilled labour  
- Using Glass Fiber Reinforced Gypsum - GFRG for construction, as it is more environment friendly than steel & concrete  
- Phosphogypsum, a byproduct of fertilizer waste works as a good replacement for Reinforced Concrete (RC)  
- With GFRG, no plastering for walls & slabs is required, and it enhances durability. It improves thermal comfort of the house giving better life to the occupants  
- GFRG reduces CO₂ emission by 50% as compared to brick walls

Spondon Bhagowati  
Green Building Consultant  
IFC  

- More than 10 million non-green homes are about to be constructed in India  
- Such non-green homes account for twice Delhi’s and 1.1 times Delhi’s annual CO₂ emission from residential homes  
- If just 20% of these 10 million homes are green, then:  
  1 - Every 4 green homes will save enough water to supply to 1 additional home  
  2 - Every 5 homes will save enough electricity to light up 1 extra home  
  3 - CO₂ emissions will be reduced by 12% thus saving more than ₹ 1087 crore

### Comparison of embodied energy and carbon dioxide emission - GFRG vs Brick Masonry

<table>
<thead>
<tr>
<th>Description (materials)</th>
<th>GFRG wall (unfilled)</th>
<th>GFRG wall (every 3rd cavity infilled)</th>
<th>Brick masonry wall</th>
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<tbody>
<tr>
<td>Unit Size</td>
<td>1m (L) × 1m (H) × 0.124m (W)</td>
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(% savings in embodied energy and CO₂ emission w.r.t. GFRG are shown in brackets)

### Energy Efficiency Measures

- Reduced Window to Wall Ratio - WWR OF 40%  
- External Shading Devices - Annual Avarage Shading Factor (AASF) of 0.58  
- Insulation of Roof Surface - U Value of 0.45  
- Insulation of External Walls - U Value of 0.45  
- Low-E Costed Glass - U Value of 3 W/m² K and SHGC of 0.45  
- Higher Thermal Performance Glass - U Value of 1.95 W/m² K and SHGC of 0.28  
- Natural Ventilation - Corridors  
- Natural Ventilation - Guest Rooms with Auto Controls  
- Variable Refrigerant Volume (VRV) Cooling System - COP of 3.45  
- Air Conditioning with Air Cooled Screw Chiller - CCOP of 3.2  
- Air Conditioning with Water Cooled Chiller - CCOP of 5.39

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(% savings in embodied energy and CO₂ emission w.r.t. GFRG are shown in brackets)
• There is a huge gap between awareness & knowledge of green affordable housing
• Before we finance it, we should educate developers and end-consumers on the benefits of sustainable green housing
• We are the only ‘Green Value Partner’ in the country helping developers / end users through their journey of concept, design, impact and final certification
• By 2023, we look to fund 300 green affordable housing projects collectively accounting for 80 lac sq ft area in 90,000 units
• We are working on a handbook that will have the know-how on green building design with respect to the 4 climatic zones in India
• It will be a one of it's kind handbook giving insights on design, finance, & environment aspects of construction
• At IIFL HFL, our processes are completely digital
• Thanks to our in-house developed technology, we manage to complete customer on-boarding to final decision in 45-50 min
Felicitating Padma Shri Saalumarada Thimmakka, affectionately called VRIKSHA MATA at KUTUMB Chapter IV in Bangalore

Takeaways from Chapter IV in Bangalore

- Understanding the need of green affordable housing in India
- Achieve sustainable living goals with green homes & eco-friendly construction techniques
- Interactive session with pioneers in sustainable living and green building architects
- Networking with real estate developers, international institutions, government bodies & NGO's
- Expert session on green affordable building construction techniques
Kutumb - An initiative towards **GREEN AFFORDABLE HOUSING**

**Chapter - I**

Ahmedabad | 8th June ‘18
- 100+ Participant
- 50+ Developers
- 5 Experts

**Chapter - II**

Indore | 17th Sept ‘18
- 100+ Participant
- 70+ Developers
- 8 Experts

**Chapter - III**

Pune | 9th Feb ‘19
- 100+ Participant
- 70+ Developers
- 9 Experts

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**Green is in the news**

![Green is in the news](image_url)
GREEN VALUE PARTNER
CONCEPTION TO CERTIFICATION

We’re first of its kind ‘Green Value Partner’ in India, to help developers from the journey of Conception to Certification, and will be hand-holding them throughout the process.

The Avior journey started with an idea of creating sustainable development in the heart of the Pune city, so as to showcase that sustainable development impacts go a very long way. The initial meeting had been done with Avior in the month of December 2018, wherein, Mr. Chetan Choudhary and Mr. Amor Kool met the promoters of Avior group and initiated the conversation to explore Green Building rating for their upcoming project in Pune Municipal Corporation Area (PMC). Mr. Amor, the GVP for Avior group explained various benefits to Avior promoters. This presentation included tangible and intangible benefit of the green buildings. Further, the GVP also gave them an initial assessment report which demonstrated the expected cost analysis and payback analysis of the project (based on the actual project information). The GVP also suggested the promoters, the empanelled green building consultants, and the auditors required by the EDGE rating system.

The rating system was critical for the project, the GVP ensured that only soft cost (consultancy and fees) is incurred during the process of entire project cycle. The hard cost or construction cost is being closely monitored and tracked throughout. The GVP from IIFL HFL worked in tandem with the consultant and the builder to maintain the sanctity of the project. As of today, Avior Aagam is finalizing its documentation, and soon will apply for EDGE Homes pre-certification. The next stage of GVP is to ensure that during construction, the project complies with all Environment and Social Governance requirements and maintains high standards of quality of construction.

Mr. Amor Kool is Head of GVP Programme at IIFL Home Finance Ltd. Along with his team he adds value by demonstrating leadership in sustainable development through technical skills, creativity and time management. He has worked on more than 50 successful green building projects within India and abroad. His expertise is to optimize building performance solutions, options, strategies and technologies to meet sustainable living objectives with minimal cost escalation in the project. He is a steering committee member of Eco-Niwas Samhita 2018 (ECBC for Residential), Panel Member of National Building Code of India 2016 and Technical Committee Member for Construction Management (including Life Safety in Construction).
SHAPING THE FUTURE

Our mission is to extend "Housing for All" towards "Green Affordable Housing for All" and we believe that our combined efforts and initiatives will work towards achieving a safer, greener and sustainable future. Each of our KUTUMB Chapter works as a stepping stone towards a bigger picture to achieve a green and sustainable future together. We believe that to bring any change, you have to be the change. A small step in this endeavor came through when we chose ‘Bangalore International Center’ - a green building as our venue for Chapter IV of Kutumb. Going forward we’ve taken a pledge to have KUTUMB at venues that promote sustainable living.