16th GRIHA Summit 2024

December 4th-5th, 2024 | New Delhi

Accelerating Climate Action in the Built Environment

SUMMIT PROCEEDINGS

THANKS TO OUR VALUED PARTNERS

GOVERNMENT PARTNERS

नवीन एवं नवीकरणीय ऊर्जा मंत्रालय MINISTRY OF NEW AND RENEWABLE ENERGY

असम चकवाब GOVERNMENT OF ASSAM

राजस्थान सरकार GOVERNMENT OF RAJASTHAN

GOVERNMENT OF TELANGANA

उत्तर प्रदेश सरकार

ca वास्तुकला परिषद् Council of Architecture

भारतीय विमानपत्तन प्राधिकरण Airports Authority of India

bmtpc

National Institute of Urban Affairs

ORGANIZED BY

GRIHA

50 THE ENERGY AND RESOURCES INSTITUTE

Creating Innovative Solutions for a Sustainable Future

PREMIER PARTNERS

KNAUF

AIS Asahi India Glass Ltd.

यूनियन बैंक Union Bank

BILATERAL & MULTILATERAL PARTNERS

ISA INTERNATIONAL SOLAR ALLIANCE

german cooperation DEUTSCHE ZUSAMMENARBEIT

giz

NRDC India

STAR PARTNER

ARS STEEL

ASSOCIATE PARTNERS

armacell MAKING A DIFFERENCE AROUND THE WORLD

SAINT-GOBAIN

Mercedes-Benz Research and Development India (MBRDI)

JC JINDAL CERAMICA

Lubrizol

GREENFINCH REAL ESTATE ENGINEERS AND CONSULTANTS PVT. LTD.

Royal SAFE COMPANY An ISO 9001:14001 Certified Company

MACR MAYR

COOLROOF® Heat Reflective Paint SRI - 122

VISHWA HARA CHAKRA

Thrislington

Panache Creating Cool Green Cities!

mahindra LIFESPACES

GUJARAT GUARDIAN LIMITED GUARDIAN SUNGUARD

TAVASYAM

REAL ESTATE PARTNERS

AMBIENCE CREACIONS

Tulip Infratech Pvt. Ltd.

elan BUILDING THE FUTURE

BESTECH BUILDING MORE THAN TRUST

TREVOC

AARIZE

MNB BUILDFAB

TRITECH Building Dreams into Reality

PRELUDE PARTNERS

MOOLCHAND health • happiness • life

Central Market Shopkeeper Association of Lajpat Nagar

SWA

Give me trees

The Climate Reality Project INDIA & SOUTH ASIA

Sustenable

SWMRT

Asai

KNOWLEDGE PARTNERS

ISHRAE

NASA

RAMA REFRIGERATION AND AIRCONDITIONING MANUFACTURERS ASSOCIATION

Aadhar Housing Finance Ltd GHAR BANEGA, TOH DESH BANEGA.

homefirst We'll take you home

IndiaShelter होम लोन्स

VASTU HOUSING FINANCE

MEDIA PARTNERS

In AWE towards green

WFM MEDIA

अमर उजाला

The 16th **GRIHA Summit**

GRIHA, recognized as the 'National Rating System for Green Buildings in India', was developed by *The Energy and Resources Institute (TERI)* with the support of the *Ministry of New and Renewable Energy (MNRE), Government of India*.

GRIHA Council evaluates the environmental performance of a building holistically over its entire life cycle, thereby providing a definitive standard for green buildings and sustainable habitats. The Government of India has recognized 'GRIHA' as an indigenous tool to evaluate Greenhouse Gas (GHG) reduction from habitats under its obligations to mitigate climate change as contained in the Nationally Determined Contributions (NDCs) documentation submitted to the United Nations Framework Convention on Climate Change (UNFCCC).

Over the years, GRIHA Council has been hosting its annual summits to deliberate on issues of national discourse in association with distinguished entities from national and international spheres, encompassing government bodies, industry partners, multilateral and bilateral organizations, academia and building practitioners. The past summits had been designed on themes such as "*Approach to Integrated Sustainability*", "*Fostering Partnerships for Sustainable Habitats*", "*Transforming Habitats*", "*Sustainable is Affordable*", "*Rejuvenating Resilient Habitats*", "*Restoring Green Economy*", "*Towards Net Positive Habitats*", and '*Empowering Sustainable and Resilient Communities*'.

The **16th GRIHA Summit** is scheduled to be held on 4th – 5th December 2024 at India Habitat Center, Lodhi Road, New Delhi, India on the theme '*Accelerating Climate Action in the Built Environment*'.

Climate action is a race against time when compared to the escalated pace of damage that is being repeatedly done to the environment; thus, raising alarm for an urgent need to accelerate climate action. The building and construction industry alone accounts for nearly 34% of global energy consumption and about 37% of greenhouse gas emissions (UNEP, 2022). The time is now to embark on transformative efforts to revolutionize our design processes, construction practices, and management of urban spaces. Towards this, GRIHA Council aims to address the urgent need to adopt sustainable practices in the built environment whilst advancing innovative solutions to mitigate the adverse effects of climate change.

This year GRIHA Council is pleased to introduce GRIHA Regional Conclaves, in addition to the annual national summit, that come with the idea to augment the development of sustainable habitats and resilient communities at regional levels in the country. Three GRIHA Regional Conclaves have been planned in Lucknow, Hyderabad, and Jaipur in this fiscal year around the same theme of the summit.

The 16th GRIHA Summit and the GRIHA Regional Conclaves are intended to serve as platforms to deliberate on the interdependence between various stakeholders in creating inclusive and climate-resilient infrastructure in our drive towards decarbonizing the built environment by 2050 and achieving the target of becoming a '*Net Zero*' nation by 2070. Aligning with the vision of becoming *Viksit Bharat @2047* encompassing various aspects of development, including economic growth, social progress, environmental sustainability, and good governance, these gatherings serve as platforms to deliberate on various ways to accelerate climate action.

We invite all stakeholders, including policymakers, industry leaders, architects, urban planners, product manufacturers, researchers, financial institutes, and civil society to participate in the Summit and Regional Conclaves; and come together and share insights, knowledge, and experiences in our drive towards advancing sustainability in the built environment.

Acknowledgements

We extend our deepest gratitude to the distinguished individuals who graced the 16th GRIHA Summit with their esteemed presence and invaluable insights. Their contributions played a pivotal role in shaping the discussions around this year's theme, *Accelerating Climate Action in the Built Environment*.

We sincerely thank: **Smt Meenakshi Lekhi**, Former Minister of State for External Affairs and Culture, Government of India, and Member of Parliament; **Shri Abhay Bakre**, Mission Director, National Green Hydrogen Mission, Ministry of New & Renewable Energy (MNRE), Government of India; **Ms Martine Aamdal Bottheim**, Minister Counsellor & Deputy Head of Mission, The Royal Norwegian Embassy; **Shri Deepesh Gehlot**, Joint Commissioner, Kendriya Vidyalaya Sangathan, Ministry of Education, Government of India; **Mr Sumit Bidani**, Chief Executive Officer, Knauf India; **Mr Aditya Bhutani**, Director and Chief Operating Officer, AIS GlassXperts, Asahi India Glass Ltd.

A special note of gratitude to our honourable session chairpersons and speakers, whose expertise and thought leadership enriched the conversations on sustainability.

We also acknowledge the unwavering support of our partners—government partners, bilateral and multilateral partners, real estate partners, knowledge partners, associate partners, exhibition partners, theme partners, institutional partners, prelude partners, and media partners—who played an integral role in making this event a grand success.

We extend our sincere appreciation to the dedicated staff of the India Habitat Centre and the TERI fraternity, whose tireless efforts ensured the seamless execution of the Summit.

The success of the 16th GRIHA Summit was further amplified by the active participation and engagement of attendees, whose perspectives and discussions added immense value to the event. We thank all participants and guests for their enthusiasm and contributions.

Lastly, we express our profound gratitude to **Dr Vibha Dhawan**, President, GRIHA Council, and Director General, TERI, for her visionary leadership and unwavering commitment to advancing sustainability in the built environment. Her guidance continues to inspire us on our collective journey towards a greener, more sustainable future.

Contents

Agenda

Day 1 Date: 4th December 2024 (Wednesday) Venue: India Habitat Centre, New Delhi		
0830 – 0930 hrs	**Registration**	
0930 – 1000 hrs	**Inauguration of "*Sanchay*" – A GRIHA Exhibition**	
1000 – 1130 hrs	**Inaugural Session** (Stein Auditorium) • Lighting the Lamp • Welcome Address • Opening Address • Special Remarks • Signing of Memorandum of Understanding • Special Address • Launch of GRIHA Publications » GRIHA Version 6.0 » 'Shashwat – Let Nature Be': GRIHA Council's Annual Magazine • Inaugural Address • GRIHA Felicitation Ceremony » GRIHA 5-star and 4-star Rated Projects » GRIHA Water Positive Certified Projects » Winners of the SHAPE Design Trophy • GRIHA Updates and Vote of Thanks	
1130 – 1200 hrs	Networking over Tea/coffee	
1200 – 1330 hrs	Plenary Session I - Timeline 2030: Policy Advocacy for a Sustainable Future (Stein Auditorium)	
1330 – 1430 hrs	Networking Lunch	
1430 – 1530 hrs	Parallel Sessions	
	Thematic Track 1 - Time to Cool Off: Managing Urban Heat (Silver Oak Hall)	Thematic Track 2 - Conservation to Inspiration: Biophilic Designs (Jacaranda Hall)
1530 – 1600 hrs	Networking over Tea/Coffee	
1600 – 1730 hrs	Plenary Session II - Decoding the Future of Energy Transition (Silver Oak Hall)	
End of Day 1		
Day 2: 5th December 2024 (Thursday) Venue: India Habitat Centre, New Delhi		
1000 –1030 hrs	GRIHA Felicitation Ceremony • GRIHA NASA Trophy 2024 Winners • Partners Appreciation • GRIHA Exhibition Design Competition Winners (Silver Oak Hall)	

1030 – 1200 hrs	Plenary Session III - Together for Tomorrow: Uniting for Climate Action (Silver Oak Hall)	
1200 - 1230 hrs	**Networking over Tea/Coffee**	
1230 – 1330 hrs	Parallel Sessions	
	Thematic Track 3 - Navigating Resource Scarcity: New Approaches for Sustainable Construction (Silver Oak Hall)	Thematic Track 4 - Traversing through Social Strata s Community Based Adaptation (Jacaranda Hall 1)
1330 – 1430 hrs	**Networking Lunch**	
1430 – 1530 hrs	**Parallel Sessions**	
	Thematic Track 5 - Incentives for a Low-Carbon Future (Silver Oak Hall)	Thematic Track 6 - Elevating Existing Buildings for Sustainability (Jacaranda Hall)
1530 – 1600 hrs	**Networking over Tea/Coffee**	
1600 – 1730 hrs	Plenary Session IV - Transforming Urban Spaces: Building for Tomorrow (Silver Oak Hall)	
1730 – 1800 hrs	**Networking**	
1800 – 1915 hrs	Valedictory Session s Award Evening (Stein Auditorium) • Welcome Address • Opening Address • Special Remarks • Launch of GRIHA Ratings » GRIHA Rating for Ports » GRIHA Infrastructure Rating for Highways • Valedictory Address • GRIHA Felicitation Ceremony » Winners of the GRIHA Exemplary Awards » GRIHA 3-star Rated Projects • Closing Remarks	
1915 – 1930 hrs	Setting the Stage	
1930 – 2000 hrs	Cultural Evening	
2000 hrs onwards	Dinner Reception (Charminar)	
Closing of 16th GRIHA Summit		

Detailed **Agenda**

Day 1: 4th December 2024 (Wednesday) Venue: India Habitat Centre, New Delhi	
0830 – 0930 hrs	Registrations
0930 – 1000 hrs	Inauguration of "Sanchay" – A GRIHA Exhibition
1000 – 1130 hrs	Inaugural Session Venue – Stein Auditorium
	• Lighting the Lamp • Welcome Remarks by **Mr Sanjay Seth,** Vice President and CEO, GRIHA Council and Senior Director, Sustainable Infrastructure Programme, TERI • Opening Address by **Dr Vibha Dhawan,** President, GRIHA Council and Director General, TERI • Special Remarks by **Mr Sumit Bidani,** CEO, Knauf India • Signing of **Memorandum of Understanding** between GRIHA Council and Kendriya Vidyalaya Sangathan, Ministry of Education, Government of India • Special Remarks by **Mr Deepesh Gehlot**, Joint Commissioner, Kendriya Vidyalaya Sangathan, Ministry of Education, Government of India • Special Address by **Ms Martine Aamdal Bottheim,** Minister Counsellor C Deputy Head of Mission, The Royal Norwegian Embassy • Launch of GRIHA Publications: » GRIHA Version c.0 » 'Shashwat – Let Nature Be': GRIHA Council's Annual Magazine • Inaugural Address by **Shri. Abhay Bakre,** Mission Director, National Green Hydrogen Mission, Ministry of New C Renewable Energy (MNRE), Government of India • GRIHA Felicitation Ceremony: » GRIHA 5-star and 4-star Rated Projects » GRIHA Water Positive Certified Projects » Winners of the SHAPE Design Trophy • GRIHA Updates and Vote of Thanks by **Ms Shabnam Bassi,** Deputy CEO C Secretary, GRIHA Council and Director, Sustainable Buildings, TERI
1130 – 1200 hrs	Networking with Tea/Coffee
1200 – 1330 hrs	Plenary Session I – Timeline 2030: Policy Advocacy for a Sustainable Future Venue - Stein Auditorium
	Calamities and disasters have become increasingly frequent due to the irreversible environmental impacts caused by human activities. In 2021, the Intergovernmental Panel on Climate Change (IPCC) Report aptly termed as "Code Red for Humanity", was a clarion call for urgent action to avert future human-induced catastrophes Policies have driven climate action by setting regulations and targets, hence accelerating the transition to a low-carbon development. The Paris Agreement is a key standpoint for climate policies that has driven dialogues and actions to limit global warming to well below 2°C above pre-industrial levels; which, in turn, encourages nations to set and meet their own greenhouse gas reduction targets, fostering international cooperation and accountability.

	Countries have made conversation-stirring, buzz-creating commitments at global platforms to limit their impact on the environment. However, there are gaps between policies and its full-scale enforcement. This session will examine the impact of existing policies, the challenges faced, and how disaster-struck areas can rebuild resilience, while also exploring strategies to advance climate action in the built environment with policies as a key driver. We are standing on the brink of a climate crisis. A lot has been spoken about 'To do's and 'Not to do's at various forums and platforms. The time to 'Act' is now and here.
	Chair: Dr Vibha Dhawan, President, GRIHA Council and Director General, TERI Panellists: • **Mr Chandra Bhushan**, President C CEO, International Forum for Environment, Sustainability C Technology (iFOREST) • **Mr Chinmaya Acharya,** Director - Programs, NRDC India • **Dr Akhilesh Gupta**, Adviser and Distinguished Visiting Professor, Centre of Excellence in Disaster Mitigation C Management, Indian Institute of Technology (IIT), Roorkee • **Mr Naim Keruwala**, Program Director (CITIIS), National Institute of Urban Affairs (NIUA) Q C A Session
1330 – 1430 hrs	Networking Lunch
Parallel Tracks	
1430 – 1530 hrs	Thematic Track 1 – Time to Cool Off: Managing Urban Heat Venue – Silver Oak Hall
	Climate change is upon us, and its escalating impacts are manifesting in the form of unprecedented heat waves sweeping across the globe. Following record-breaking global temperatures in 2024, India faced severe heat waves, with temperatures exceeding 46 degrees Celsius. Rapid urbanization exacerbates the issue of Urban Heat Island – a phenomenon characterized by reduced green spaces, high population density, limited access to cooling, and dense building concentration, that render urban areas significantly warmer than their rural counterparts. Therefore, it becomes crucial to take urgent mitigative measures to address the cause and effect of warmer temperatures. The session intends to discuss the need for a comprehensive and transformational strategy to cool our cities through planning and design interventions, incorporating cool roof materials and technologies etc. in the built environment.
	Chair: Dr Vishal Garg, Dean of Research, Plaksha University Panellists: • **Dr Manju Mohan,** Former Professor (HAG) and Head, Centre for Atmospheric Sciences (CAS), Indian Institute of Technology, Delhi • **Ms Aarti Nain,** Advisor, Urban Cooling and Heat Risk Mitigation, UN Environment Programme (UNEP) • **Mr Chinmaya Acharya,** Director - Programs, NRDC India • **Dr Anita Gupta,** Head, Climate, Energy and Sustainable Technology (CEST) Division, Department of Science and Technology, Government of India • **Ms Neetu Jain,** Managing Director, Panache Greentech Solutions Pvt. Ltd. Q C A Session

1530 – 1600 hrs	Networking with Tea/Coffee
1600 – 1730 hrs	Plenary Session II – Decoding the Future of Energy Transition Venue - Silver Oak Hall The rapid growth of the global population and urban migration is driving increased energy demand, intensifying the impacts of climate change. This necessitates a swift transition to sustainable energy solutions. As the global transition to sustainable energy accelerates, the need for affordable, reliable, and low-emission energy sources has become more dire. This session will explore key drivers of this transition, such as improving energy access, advancing renewable energy technologies, and promoting sectoral electrification. A focus on enhancing local planning and integrating community engagement into decision-making processes is essential for shaping a more sustainable and equitable clean energy landscape. By fostering collaboration across sectors, we can accelerate the adoption of clean energy systems that meet both environmental and societal needs, ensuring a more sustainable future. **Chair: Mr Jiwesh Nandan**, Distinguished Fellow, Industrial Energy Efficiency, The Energy and Resources Institute (TERI) Panellists: • **Mr Atul Kumar Bali**, Executive Director, Powergrid Corporation of India Ltd. and Director, National Smart Grid Mission and Expert Group of Smart Metering, Ministry of Power, Government of India • **Mr Saurabh Kumar**, Vice President, Global Energy Alliance for People and Planet (GEAPP), India • **Ms Suhela Khan,** Country Programme Manager, Women's Economic Empowerment, UN Women • **Ms Srestha Banerjee**, Director, Just Transition @ International Forum for Environment, Sustainability C Technology (iFOREST) Q C A Session
End of Day 1 Day 2: 5th December 2024 (Thursday) **Venue: India Habitat Centre, New Delhi**	
1000 – 1030 hrs	GRIHA Felicitation Ceremony GRIHA NASA Trophy 2024 Winners Partners Appreciation GRIHA Exhibition Design Competition Winners Venue - Silver Oak Hall
1030 – 1200 hrs	Plenary Session III - Together for Tomorrow: Uniting for Climate Action Venue - Silver Oak Hall "*Mata Bhumi Putroham Prithivyah*" - "The Earth is My Mother, and I am Her Son" - serves as a strong reminder of our common responsibility to protect our Mother Earth. Achieving sustainability is not the responsibility of a single entity but a collaborative effort across various sectors, including governments, corporates, academic institutions, civil society, and communities. Each group of stakeholders has a unique role in driving progress toward a more sustainable future. The dichotomy between adaptation and mitigation, which arguably creates uncertainty at the implementation level, is shaped by the role of the actors involved. In this context, the role played, and impact made by stakeholders from various strata of the society and diverse sectors is critical in accelerating climate action within the built environment.

	The session intends to understand the defined role, responsibilities and interests of stakeholders in accelerating climate action. It will address the next steps required to strengthen multi-stakeholder collaboration, for scaling up sustainable initiatives.
	Chair: Mr Manjeev Singh Puri, Distinguished Fellow, Earth Science and Climate Change, The Energy and Resources Institute (TERI) Panellists: • **Dr Sukhgeet Kaur**, DDG (Cost) C Adviser (Energy), Department of Defence Production, Ministry of Defence • **Mr Anshul Tewari**, Founder C CEO, Youth ki Awaaz • **Mr Vaibhav Gupta**, Associate Director, KPMG India • **Mr Prabhakant Jain,** Head - CSR, DS Group • **Mr Shailesh Ranjan,** Business Head, Asahi India Glass Ltd. (AIS) Q C A Session
1200 – 1230 hrs	Networking with Tea/Coffee
Parallel Tracks	
1230 – 1330 hrs	Thematic Track 3 – Navigating Resource Scarcity: New Approaches for Sustainable Construction Venue – Silver Oak Hall The production, transportation, and processing of construction materials significantly contribute to high embodied energy consumption and a substantial carbon footprint. There has been a notable shift in the construction market towards alternative materials like fly ash, slag, and GGBS, etc. These materials are not derived from non-depletable sources and will eventually face availability challenges. Research and innovation are crucial to address the challenge of depleting sustainable materials. This involves exploring new alternatives such as bio-based and recycled materials, advanced technologies like self-healing concrete, and applying the principles of the circular economy. The session aims to deliberate on the challenges associated with current alternative materials and delve into ongoing research on new, sustainable options, ensuring a resilient and forward-thinking approach to construction in the face of resource depletion. By analysing successful case studies, it will also have to focus on the latest research findings on material performance and sustainability. **Thematic Address: Mr Sanjay Pant**, Scientist-G C DDG (Standardization-II), Bureau of Indian Standards (BIS) • **Chair: Dr Shailesh Kumar Agrawal,** Executive Director, Building Materials C Technology Promotion Council (BMTPC), Ministry of Housing C Urban Affairs (MoHUA), Government of India Panellists: • **Dr Sunita Purushottam,** Head of Sustainability, Mahindra Lifespace Developers Ltd. • **Mr Anand Santhanam,** Executive Director, Saint-Gobain India Private Limited - Glass Business • **Mr S. V. Patil,** Head - Ready Mix Concrete C Key Accounts, UltraTech Cement Ltd. • **Mr Sumit Bhatia**, Director, ARS Steel Q C A Session

1230 – 1330 hrs	Thematic Track 4 – Traversing through Social Strata s Community Based Adaptation Venue – Jacaranda Hall 1 Resilience in the context of the built environment goes beyond mere structural durability and integrates social and economic dimensions. It reflects the ability of infrastructures and communities to endure, adapt, and recover from adverse environmental, economic, or social impacts. Marginalized and local communities are disproportionately affected by climate change facing challenges such as health hazards, loss of property, unemployment, migration etc. In these dire circumstances, community-based adaptation strategies rooted in local knowledge, experiences, participation are paramount. It is imperative` to ensure the inclusion of diverse voices and perspectives of the local communities in climate policies, solutions and infrastructure development. The session aims to explore the challenges confronting vulnerable communities while providing actionable strategies to foster equity and resource accessibility, thereby enabling a just and resilient transition for the vulnerable communities. The discussion will also dwell on locally led adaptation. **Chair: Dr Priyanka Kochhar**, Founder and CEO, The Habitat Emprise Panellists: • **Mr Mohak Gupta,** Assistant Program Director - Circular Economy and Resource Efficiency, Development Alternatives • **Ms Zerin Osho,** Director of the India Program, Institute for Governance C Sustainable Development (IGSD) • **Ms Nidhi Anand,** Head of Programmes, People's Power Collective • **Mr Jay Rajesh Thakkar,** Associate Professor, Faculty of Design and Head of Exhibition, CEPT University Q C A session
1330 – 1430 hrs	**Networking Lunch**
Parallel Tracks	
	Thematic Track 5 – Incentives for a Low-Carbon Future Venue – Silver Oak Hall Green economy represents a low carbon, resource efficient and socially inclusive development. With a focus on access to green finance, technology and investments, it advocates for a macro-economic approach towards sustainable economic growth. It is driven by government, public and private investment such as carbon credit schemes, green bonds, green credit programmes, tax rebates and incentives on green buildings etc. These green investments are enabled and supported through policy reforms and regulatory changes, aiding in building assets (economic growth and infrastructure) that promote reduced carbon emissions through carbon offsetting, enhance energy and resource efficiency, and preserve ecosystem services. The session seeks to explore such green incentives and financial mechanisms available to diverse stakeholder groups, gain insights into the benefits it offers and its potential impact on the overarching goal of developing a sustainable green economy. The discussion will also highlight the challenges in implementing such frameworks while ensuring transparency and accountability. It will also discuss strategies to raise awareness on these incentives for accelerating the transition to sustainable practices.

	Chair: Dr Dhruba Purkayastha, Director, Growth and Institutional Advancement, Council on Energy, Environment and Water (CEEW) Panellists: • Mr Saurabh Diddi, Director, Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India • Ms Neha Khanna, Senior Manager, Climate Finance, Climate Policy Initiative • Ms Rachika Agrawal Sahay, Equity Partner, Argus Partners • Mr Sandeep Sonigra, Managing Director, Orange County Group • Mr Zohaib Siddique, Senior General Manager - Architecture C Design, Whiteland Corporation • Mr Archit Batra, Head - New Business Initiatives, FCF India Q C A Session
1430 – 1530 hrs	Thematic Track 6 – Elevating Existing Buildings for Sustainability Venue – Jacaranda Hall Existing buildings tend to have a higher operational carbon footprint due to the structures being developed before contemporary energy efficiency standards were implemented. These systems often consume excessive energy, as they were not designed to meet the demands of today's occupants or climate conditions. Retrofitting this existing stock of buildings becomes imperative and a pivotal strategy for reducing the operational carbon emissions from this ensemble of structures. Common upgrade strategies for effective retrofitting include enhancing insulation, upgrading to energy-efficient windows and HVAC systems, integrating renewable energy, upgrading to low-flow fixtures, etc. By fostering collaborative dialogue, this session aims to equip attendees with actionable knowledge and tools to transform existing buildings into resilient, energy- efficient spaces that contribute to a sustainable future. Chair: Ms Vaishnavi T G Shankar, Lead - Training C Capacity Building, National Institute of Urban Affairs (NIUA) Panellists: • Mr Sudheer Perla, Managing Director, Asia, Tabreed and Member, Alliance for an Energy Efficient Economy (AEEE) • Ar. Shamit Manchanda, Founding Partner C Principal Architect Manchanda Associates • Ms Nandita Bhatt, Executive Director (Planning), Airport Authority of India (AAI) • Dr Arun Tripathi, Scientist G, Ministry of New and Renewable Energy (MNRE), Government of India • Ms Samhita M, Founder and Managing Director, Ela Green Buildings C Infrastructure Consultants Q C A Session

1530 – 1600 hrs	Networking with Tea/Coffee
1600 – 1730 hrs	Plenary Session IV – Transforming Urban Spaces: Building for Tomorrow Venue - Silver Oak Hall
	Sustainable infrastructure development focuses on creating systems and facilities designed to reduce environmental impact, optimize resource efficiency, integrate technology, and promote social equity. This ensures resilience against climate change by building infrastructure capable of withstanding extreme weather events and adapting to shifting environmental conditions. It also emphasizes community engagement, ensuring that local needs and perspectives are incorporated into planning and decision-making processes. Given the urgent need to rethink traditional infrastructure considering climate change, population growth, and resource scarcity, it is essential to leverage the transformative potential of smart technologies. These innovations enhance precision, efficiency, and safety while ensuring accessibility and affordability. By fostering dialogue among architects, urban planners, policymakers, and community leaders, this session aims to generate actionable insights and collaborative strategies for creating ecological balance; and fostering economic growth and social well-being, ultimately contributing to the creation of livable, equitable, and thriving communities.
	Chair: Scientia Professor Deo Prasad AO FTSE, CEO, NSW Decarbonisation Innovation Hub, University of New South Wales (UNSW), Sydney Panellists: • **Mr Rajendra Ratnoo**, IAS, Executive Director, National Institute of Disaster Management (NIDM) • **Dr. Nupur Bahadur,** Associate Director, Circular Economy and Waste Management, The Energy and Resources Institute (TERI) • **Mr Hemant Bherwani**, Senior Scientist, National Environmental Engineering Research Institute (NEERI) • **Mr Sharif Qamar**, Associate Director, Transport and Urban Governance, The Energy and Resources Institute (TERI) • **Mr Sanjay Seth,** Vice President C CEO, GRIHA Council and Senior Director, The Energy and Resources Institute (TERI) Q C A Session
1730 – 1800 hrs	Networking
1800 – 1930 hrs	Valedictory Session s Award Evening Venue - Stein Auditorium

	• Opening Address by **Dr Vibha Dhawan**, President, GRIHA Council and Director General, TERI • Special Remarks by **Mr Aditya Bhutani**, Director and COO, AIS GlassXperts, Asahi India Glass Ltd. • Launch of GRIHA Ratings: • GRIHA Rating for Ports • GRIHA Infrastructure Rating for Highways • Valedictory Address by **Smt. Meenakashi Lekhi**, Former Minister of State for External Affairs and Culture, Government of India and Member of Parliament • GRIHA Felicitation Ceremony: • Winners of the GRIHA Exemplary Awards • GRIHA 3-star & 2-star Rated Projects • Closing Remarks by **Mr Sanjay Seth**, Vice President and CEO, GRIHA Council and Senior Director, Sustainable Infrastructure Programme, TERI
1930 – 2000 hrs	Cultural Evening
2000 hrs onwards	Dinner Reception Venue - Charminar

Side Event - Innovative Strategies for Sustainable Construction

Scaling up Building Integrated Photovoltaics (BIPV) Applications in India

On its journey to achieve net zero by 2070, India is making significant progress in deploying clean technologies like solar PV to meet growing energy demands. The building and construction sector, which accounted for approximately 17% of India's total greenhouse gas (GHG) emissions in 2019,[1] must undergo substantial decarbonisation to support the country's energy transition. The production, transport, and processing of traditional building materials have historically led to high embodied energy consumption and a sizeable carbon footprint. Now, as the construction industry pivots towards sustainability, BIPV has emerged as a promising solution, integrating solar PV directly into building structures.

In response to this, the New and Innovative Solar Applications (NISA) programme was launched jointly by GIZ and the Ministry of New and Renewable Energy (MNRE) to unlock the untapped potential of solar technologies like BIPV. Under this initiative, India's BIPV potential was estimated at an impressive 30G GW.[2] However, several barriers continue to hinder progress, including high upfront costs, higher tariffs due to limited product availability, challenges in cleaning and maintenance, a lack of standardisation, and other technical issues related to implementation.

The 16th GRIHA Summit aims to explore vital strategies for achieving sustainability by emphasizing the essential aspects of policy advocacy, stakeholder action, energy transition and promoting smart C resilient infrastructure development. This session—a side event at the GRIHA summit— is being organised by TERI and GRIHA Council, under the Development Partnership with the Private Sector (dPP) project by GIZ India and Ornate Solar, aimed at promoting and scaling up the adoption of BIPV in India over the next three years. The session will examine the challenges and opportunities associated with BIPV adoption, focusing on feasibility, efficiency, capacity building, and the sustainability of current PV materials. While BIPV promises to reduce reliance on conventional energy by generating power at the building level, we will address key concerns around balancing aesthetics with efficiency, the lifecycle impacts of BIPV materials, and the economic viability of large-scale applications.

Furthermore, the session will explore recent research and technological advancements in BIPV, including innovations in transparent PV modules, lightweight designs, and energy-efficient coatings. By reviewing successful case studies, participants will gain valuable insights into material performance, design integration, and the sustainability benefits of BIPV. This forward-looking approach aims to support a resilient transition in construction practices, paving the way for net-zero energy buildings.

[1] https://www.wri.org/insights/india-just-transition-low-carbon-construction

[2] (GIZ, CSTEP, et. al., 2023)

Agenda

5th December 2024 (Thursday) Time: 0G30 – 1330 hrs (IST) Venue: Jacaranda Hall – 2, India Habitat Centre, New Delhi, India	
09:30 – 1000 hrs	Registration
1000– 1045 hrs	**Welcome Addresses by Mr. Girish Sethi**, Senior Director C Senior Fellow, Energy Programme, The Energy and Resources Institute (TERI)
	Special Remarks by: • **Mr. Abhinav Jain**, Senior Energy Advisor, GIZ India • **Ms. Archana Khanna,** Founding Partner, FIRST PRINCIPLE C Convener, Sustainability Committee, Indian Institute of Architects, Northern Chapter Keynote Addresses by: • **Dr Mohammad Rihan**, Director General, National Institute of Solar Energy (NISE) • **Ms Varsha Punhani**, Head HSMI, Housing and Urban Development Corporation (HUDCO)
1045 – 1130 hrs	Technical Presentations by: • **Dr. Dieter Moor**, CEO C Founder, Arconsol • **Mr. Gazmend Luzi,** CEO, Sunage • **Mr. Dirk Bräunlich**, Director of Sales and Business Development-Asia, Von Ardenne • **Dr. Pierluigi Bonomo**, Senior Researcher, University of Applied Sciences and Arts of Southern Switzerland (SUPSI) - *Online*
1130 – 1150 hrs	**Networking Tea/ Coffee Break**
Panel Discussion on "Scaling up BIPV Applications in India"	
1150 – 1200 hrs	**Context Setting Presentation by Ms. Hemakshi Malik**, Electricity & Renewables Division (ERD), TERI
1200 – 1300 hrs	**Session Moderator: Mr. Daniel Lipschits**, President and Founder, Biosfera Panellists: • **Mr. Hans-Peter Merklein**, Entrepreneur, Unltd Solar and Ex-CEO C Founder, Grenzebach Envelon GmbH • **Mr C K Varma**, Former Special Director General, Central Public Works Department (CPWD), Government of India • **Mr Zohaib Siddique**, Senior General Manager - Architecture C Design, Whiteland Corporation • **Mr Amit Sharma**, Principal Architect, Axiom India • **Mr Gautam Dey**, President- Project Commissioning, Asset Management, Clubs, Interior Fitout, Event Management, M3M India Pvt. Ltd. • **Mr Anurag Bajpai**, Director, GreenTree Global • **Mr Akash Deep**, Deputy General Manager and Treasurer, GRIHA Council
1300 – 1325 hrs	QsA

1325 – 1330 hrs	**Concluding Remarks by Mr Sanjay Seth,** Vice President and CEO, GRIHA Council and Senior Director, Sustainable Infrastructure Programme, TERI
1330 hrs onwards	Networking Lunch
End of Side-Event	

Prelude to 16th GRIHA Summit

GRIHA Regional Conclaves

This year GRIHA Council introduced GRIHA Regional Conclaves, in addition to the annual national summit. The regional conclaves came up with the idea to augment the development of sustainable habitats and resilient communities at regional level. These regional conclaves acted as precursors to the 16th GRIHA Summit.

Till now, three GRIHA Regional Conclaves have successfully been hosted centered around the theme- Accelerating Climate Action in the Built Environment.

- Lucknow, Uttar Pradesh- 20th June 2024
- Hyderabad, Telangana- 30th August 2024
- Jaipur, Rajasthan- 25th October 2024

For more information, please refer to the link: https://www.grihaindia.org/conclave/

GRIHA Green Buildings Tours

GRIHA Council conducted four Green Tours during the year. The objective of the green tour was to raise awareness among the delegates regarding the operations of a sustainable building and concepts of energy conservation, renewable energy, utilization of daylight, functioning of domestic sewage treatment plant (STP) water saving and sustainable designs, among others. The tours included interactive sessions with the project's architect and green building consultant, along with experts from GRIHA Council, where the delegates learnt about the operation and maintenance schedules and protocols of operating a green building covering the design, construction and operational stages. Following Green Tours were conducted during the year:

1. Light House Project, Lucknow
2. Civil Aviation Research Organization, Hyderabad
3. KMT Logistics HQ Building, Jaipur
4. Garvi Gujarat Bhawan, New Delhi

Paryavaran Rakshak Programme 3.0

To promote environmental sustainability and raise awareness about sustainable development, GRIHA Council organized a community-driven Plogging Event at the Central Market, Lajpat Nagar on November 12, 2024 and Green Carnival at Stein Auditorium, India Habitat Center, New Delhi on the occasion of Children's Day on November 14, 2024. The plogging event aimed to encourage citizens to participate in the combination of jogging and litter collection to keep the streets clean and the city green. The prime event partners for the event were Marcedes Benz; The Climate Reality Project; Solid Waste Management Roundtable (SWMRT), GiveMeTrees, ASAI, Moolchand Hospital, Shopkeeper's Welfare Association, Central Market Shopkeeper Association of Lajpat Nagar, and The Energy and Resources Institute (TERI). The following dignitaries were present during the event:

- Ms. Pooja M, Deputy Commissioner, Central zone, Municipal Corporation of Delhi
- Dr. Sunil M Raheja, Director of Internal Medicine, Moolchand Medcity, New Delhi
- Mr. Gopal Dawar, Chairman, Central Market Shopkeeper's Association
- Mr. Yoginder Dawar, President, Central Market Shopkeeper's Association
- Mr. Rakesh Narang, General Secretary, Central Market Shopkeeper's Association
- Mr. Manoj Kumar, General Secretary, Shopkeeper's welfare association, Lajpat Nagar
- Shri Virender Tomar, Sanitation Superintendent, Central Zone, Municipal Corporation of Delhi
- Mr. Pushpendra Kumar, Sanitary Inspector, Central Zone, Ward no – 144, Municipal Corporation of Delhi

"**This event promotes the idea that cleanliness should be a daily habit for everyone and raises awareness about the importance of keeping our city clean**" noted by Ms. Pooja M, Deputy Commissioner, Central zone, Municipal Corporation of Delhi. GRIHA Council received overwhelming responses from the Market Associations of Lajpat Nagar, showcasing strong community support for the event. Over 200 participants, including local shopkeepers and students from various schools and colleges, took part in the event. Additionally, more than 70 sanitation workers joined the event, contributing their valuable support to the initiative. To conclude the event, various interactive activities along with a Zumba session were conducted, where participants followed a positive routine. The energetic playlist encouraged everyone to dance, relax and wrap up the day feeling more enthusiastic and inspired.

Paryavaran Rakshak Programme, now in its third edition, encourages school children to understand the principles of sustainability through various competitions, interactive activities, and model making exhibitions. This year, over 300 students from various schools across India participated, showcasing their ideas and initiatives on how to protect and preserve the environment for future generations.

The 'Green Carnival' served as a platform for school students to showcase their understanding of the concept of sustainability which included various competitions as follows:

- **Drama carnival:** Performances showcased the importance of environmental consciousness and innovation based on the theme " ***Building Tomorrow- Green and Smart***"
- **Musical parody:** the musical parody ***'Climate War'*** combined poetry and musical melodies emphasizing on the dramatic and urgent fight against climate change.
- **Reel competition:** With ***'The Burning Earth'*** as the theme, the competition encouraged participants to focus on urgent environmental issues, particularly climate change and its catastrophic effects.
- **Model making exhibition:** By combining ancient knowledge with modern ideas, the Model Making Exhibition with the theme ***'The Past and the Future'*** demonstrated students' creative solutions to environmental problems.

GRIHA Council received more than 50 entries from schools across the country for the competitions. More than 10 schools were shortlisted and around 150 students from various states such as Hyderabad, Jammu & Kashmir, Uttarakhand, Uttar Pradesh, Telangana and Haryana performed at the event.

The winners under various competitions of Paryavaran Rakshak Programme 3.0 are:

1. **Drama carnival**
   - Junior category
     - » Winner - Amity International School, Vasundhara, Sector 6, Ghaziabad, UP
     - » Special mention - Kartavya Foundation
   - Senior category
     - » Winner - Dayawati Dharmavira Public School, Bijnor
     - » 1st Runner-up - Army Public School, Ratnuchak
2. **Musical parody**
   - Junior category
     - » Winner - Bharatiya Vidya Bhavan's Atmakuri Rama Rao School, Hyderabad
   - Senior category
     - » Winner – Dayawati Modi Academy, Meerut
     - » 1st runner-up - Delhi Public School, Ranipur
3. **Reel competition**
   - Winner (Junior category) - Amity International School, Vasundhara, Sector 6, Ghaziabad, UP
4. **Model making competition**
   - Junior category
     - » Winner - Billabong High International School, Noida
   - Senior category
     - » Winner - Dayawati Modi Academy, Meerut
     - » 1st runner-up - Amity International School, Vasundhara, Sector 6, Ghaziabad, UP

The jury member for the event were Mr. Navaneeth Raghu, Lead – Corporate Sustainability, Mercedes-Benz Research and Development India; Mr. Ishtiyak Ahmad, Manager – Education, Give Me Trees Trust; Ms. Shabnam Bassi, Deputy CEO & Secretary, GRIHA Council and Director, Sustainable Buildings Division, TERI and Mr. Akash Deep, Deputy General Manager, GRIHA Council.

Mr. Navaneeth Raghu, Lead – Corporate Sustainability, Marcedes-Benz Research and Development India shared his childhood experiences from Children's Day celebration where a tree plantation drive was conducted.

"It is admirable and encouraging to see the children taking sustainability initiatives and accelerating climate action, both nationally and internationally" shared Mr. Sanjay Seth, Vice President & CEO, GRIHA Council and Senior Director, Sustainable Infrastructure, TERI.

Ms. Monika Khanna from Solid Waste Management Roundtable (SWMRT) and Mr. Bhavesh Swami from The Climate Reality Project conducted the training and awareness sessions on Solid Waste Management and Sustainable education respectively.

The two best performances from the competition were chosen, and trophies and prizes were distributed among winners and participants during the event.

16th GRIHA
Summit Exhibition

"SANCHAY: An Exploration Through Centuries and Beyond"

On the sideline of the 16th GRIHA Summit an exhibition titled "Sanchay" was inaugurated by **Ms Martine Aamdal Bottehiem,** Deputy Head of Mission & Minister Counsellor, The Royal Norwegian Embassy in the presence of other eminent dignitaries during the inaugural session.

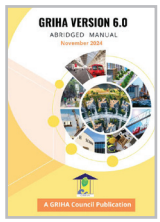
Centred around the theme 'Accelerating Climate Action in the Built Environment', the exhibition reflected the evolution of architectural styles and technologies across three distinct centuries: the 19th, 20th, and 21st centuries, and beyond, with a focus on accelerating climate action through models. It explored how architectural practices evolved to address climate challenges and how future innovations can further enhance climate resilience and sustainability.

The exhibition highlighted the advancements in industry trends that propelled a paradigm shift in sustainable materials and technologies and featured live models from an architectural design competition showcasing the evolution of architectural features over time.

Many product manufacturers and schools showcased innovative ideas, technologies and materials that can contribute to advancing the sustainable transition of the construction and building industry.

One of the key highlights of the exhibit was the "Carbon capture wall" which offset 220 grams of CO_2 equivalent per square meter.

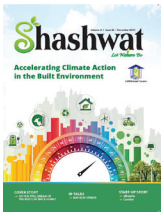
GRIHA Publication
Released During The Year



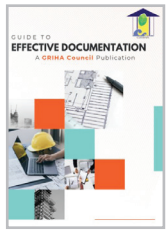
- **GRIHA Version 6** is the result of careful integration of user feedback, market insights, and practical implementation considerations, aiming to drive greater resource efficiency. With improved benchmarks, it offers a comprehensive framework for assessing the development and operational efficiency of green buildings while evaluating their economic feasibility. Broadly, it aspires to benefit society by reducing emissions, alleviating pressure on natural resources, and improving overall operational efficiency.

- The **GRIHA Rating for Ports** introduces a standardized framework with defined parameters to assess and enhance the sustainability performance of ports. This initiative promotes the adoption of best practices in port operations, fostering environmentally responsible and efficient maritime infrastructure.

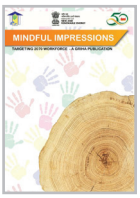
- The **GRIHA Infrastructure Rating for Highways** has been developed to meet four primary objectives: advancing sustainability beyond prevailing standards, ensuring uniformity in the evaluation of highway projects, simplifying the complexities of sustainability for more informed decision-making, and standardizing metrics to deliver a comprehensive view of highway performance.



- **SHASWAT- 'Let Nature Be'** is an annual thematic magazine published by GRIHA Council. This year centred around the theme "Accelerating Climate Action in the Built Environment" the magazine comprises articles, interviews and testimonials from industry experts with diverse backgrounds who have contributed to the areas of research in the domain of sustainability.



- **Guide to Effective Documentation** has been developed as a part of the GRIHA Technical Manual series. It offers comprehensive guidance to the best practices for submitting documents and streamlining the evaluation process, thereby, ensuring a systematic and transparent assessment which is credible and aligned with GRIHA's appraisal requirements.



- **Mindful Impressions- Targeting 2070 Workforce** is a compilation of the sustainable initiatives undertaken by the schools of Navodaya Vidyalaya Samiti in the fields of energy efficiency, renewable energy integration, waste and water management, health and hygiene, occupant comfort etc. with an intent to reduce their carbon and ecological footprint.

- **Manual on Good Construction Management Practices** has been meticulously crafted to provide extensive guidance on good practices for construction activities on-site that not only ensure resource efficiency and the safety and well-being of the workforce but also safeguard our environment. It encapsulates fundamental aspects such as labour safety, air and soil protection, water conservation, material and waste management and tree preservation, provides a reference guide to the construction industry and strives for continuous improvement.

Memorandum of Understanding (MoU) **Signed During the Year**

In the year 2024, extending new partnerships, GRIHA Council signed MoU with the following organizations to advance the development of sustainable habitats at regional levels through capacity building, awareness and rating & certifications.

- Kendriya Vidyalaya Sangathan, Ministry of Education, Government of India and GRIHA Council.
- The Indian Institute of Architects (IIA), Uttar Pradesh Chapter
- The Institute of Indian Interior Designers (IIID), Lucknow Regional Chapter
- Bangalore Metro Rail Corporation Limited (BMRCL)
- Vellore Institute of Technology (VIT)
- Indian Plumbing Association (IPA), Jaipur Chapter
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHARE) Jaipur Chapter
- Fire & Security Association of India (FSAI)

Kendriya Vidyalaya Sangathan, Ministry of Education, Government of India and GRIHA Council

The Indian Institute of Architects (IIA), Uttar Pradesh Chapter

The Institute of Indian Interior Designers (IIID), Lucknow Regional Chapter

Bangalore Metro Rail Corporation Limited (BMRCL)

Vellore Institute of Technology (VIT)

Indian Plumbing Association (IPA), Jaipur Chapter

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHARE) Jaipur Chapter

Fire & Security Association of India (FSAI)

Inaugural Session

The inaugural session was graced by the presence of **Shri Abhay Bakre,** Mission Director, National Green Hydrogen Mission, Ministry of New & Renewable Energy (MNRE), Government of India; **Dr Vibha Dhawan**, President, GRIHA Council, and Director General, TERI; **Ms Martine Aamdal Bottheim**, Deputy Head of Mission and Minister Counsellor, The Royal Norwegian Embassy; **Shri Deepesh Gehlot,** Joint Commissioner, Kendriya Vidyalaya Sangathan, Ministry of Education, Government of India and **Mr Sumit Bidani,** Chief Executive Officer, Knauf India

In her opening address, **Dr Vibha Dhawan**, President, GRIHA Council, and Director General, TERI, stated, “As a comprehensive platform, this summit facilitates deliberation on the interdependence of various stakeholders in building inclusive, climate-resilient infrastructure. Our overarching aim is to unite everyone in recognizing the vital role each individual and organization plays in combating climate change. As I often say, each stakeholder—each one of us—is contributing to the climate, for better or worse.”

Welcoming the gathering, **Mr Sanjay Seth,** Vice President and Chief Executive Officer, GRIHA Council and Senior Director, Sustainable Infrastructure Programme, TERI emphasized, "Every building, every design, and every choice we make has the power to redefine the future of our planet. Accelerating climate action in the built environment is not just a goal—it is our collective responsibility to shape a sustainable future for generations to come."

In his Inaugural Address, **Shri Abhay Bakre,** Mission Director, National Green Hydrogen Mission, Ministry of New & Renewable Energy (MNRE), Government of India, said, "The building sector stands out as one of the most promising sectors to act as an enabler of achieving our sustainability goals. GRIHA Council's effective solutions and recommendations address critical issues of climate change which aligns with the national and global climate action goals. Builders, professionals, and stakeholders worldwide should aspire to achieve the benchmarks set by GRIHA ratings to drive sustainable practices."

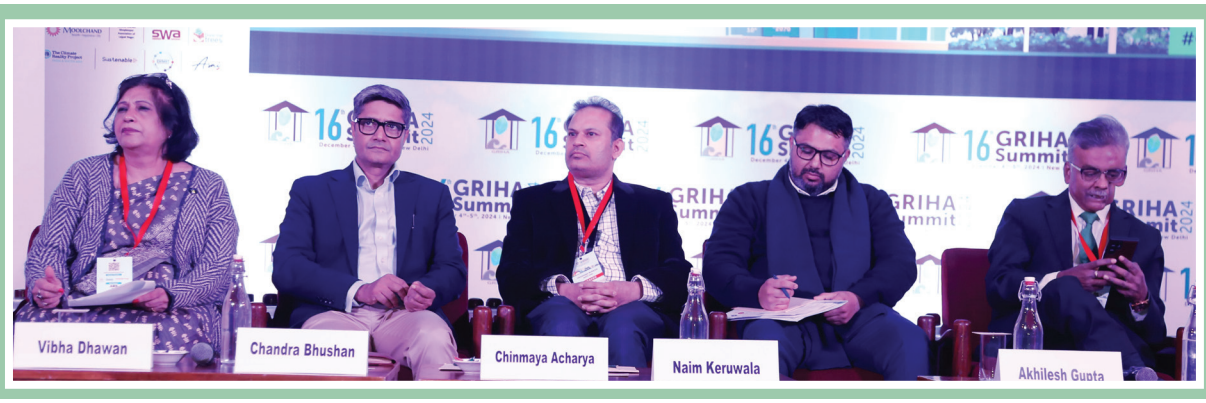
Ms Martine Aamdal Bottheim, Deputy Head of Mission and Minister Counsellor, The Royal Norwegian Embassy, in her special address highlighted Norway's commitment to supporting sustainable solutions. She remarked, "Global discussions now focus on transitioning to zero carbon buildings, adopting circular economy principles, and enhancing urban climate resilience. The GRIHA summit is very relevant from this global perspective." She further highlighted the excellent collaboration between Norway and India in the area of blue economy, circular economy, renewables, food security, research, and higher education.

Mr Sumit Bidani, Chief Executive Officer, Knauf India, in his special remarks, underscored, "Sustainability is not just a buzzword; it is an absolute necessity. We believe innovation is key, which is why we are actively exploring advanced materials and solutions to tackle the challenges of climate change."

Plenary Sessions

Plenary Session 1: Timeline 2030: Policy Advocacy for a Sustainable Future

Chaired by **Dr Vibha Dhawan, President, GRIHA Council and Director General, TERI - The Energy and Resources Institute**, she emphasized the cruciality of building resilient cities, especially in flood-prone areas. She said "It is widely accepted at COP29 that to survive, global temperatures must not rise beyond 2°C. The real challenge lies in bridging the gap between policy and implementation, particularly in regions like the Himalayas.



Mr. Chandra Bhushan, President & CEO, International Forum for Environment, Sustainability & Technology (iFOREST) highlighted three major key points for the reformation of policies: (i) to define urban areas in the right way, (ii) to build strong local governance, (iii) to focus not on incremental but disruptive solutions. He further added that the development spread is happening at a much larger speed than the formulations of local government. Simultaneously, the economy is moving at a much larger pace than the formulation of policies.

Dr. Akhilesh Gupta, Adviser and Distinguished Visiting Professor, Centre of Excellence in Disaster Mitigation & Management, Indian Institute of Technology, Roorkee stated that India faces significant vulnerability to climate-related disasters, with floods, cyclones, and droughts occurring frequently and affecting various parts of the country consistently. He further added that there are a few policies that deliver climate co-benefits and if we change the narrative on that side, it will probably help us implement climate action more sincerely in a dedicated fashion.

Mr. Chinmaya Acharya, Director - Programs, NRDC India highlighted that vulnerability and risk analysis are important for flood-prone areas. The eastern and western areas are very different where the eastern has good resiliency and adaptation capabilities compared with Western India. He stated that the increase in temperature is even 5° C in certain areas of Delhi, which is directly connected with infrastructure development and vehicular emissions. This calls for policies at the local level, instead of just central governmental policies.

Mr. Naim Keruwala, Program Director (CITIIS), National Institute of Urban Affairs (NIUA) underlined the interconnectedness of mitigation and adaptation. He explained that while water is integral to adaptation, energy plays a crucial role in mitigation, highlighting the need for a holistic approach to address climate challenges. He highlighted a pilot project in Nagpur, showcasing wastewater treatment and recycling for non-potable applications, ensuring sustainable water use.

Plenary Session 2: Decoding the Future of Energy Transition

Chaired by **Mr. Jiwesh Nandan, Distinguished Fellow, Industrial Energy Efficiency, TERI - The Energy and Resources Institute**, he set the tone of the discussion stating "Energy has undergone numerous transitions throughout history, and looking back, we can better understand why electricity has become our primary source of energy today. In the 1880s, electricity was first introduced as a utility in the U.S., and within just 110 years, it became the dominant energy source. Before this period, various types of energy were used for lighting, heating, transportation, and other human needs. Today, electricity has become indispensable. However, after using vast amounts of energy over the past 50 years, we've now reached a limit, and a crisis is emerging."

Mr. Atul Bali, Executive Director, Power Grid Corporation Of India Limited (Powergrid) and Director, National Smart Grid Mission and Expert Group of Smart Metering, Ministry of Power, Government of India highlighted that the key concerns in the energy transition are reliability and affordability. In India, grid stability remains the biggest challenge, especially when you consider its scale—this year, India's peak demand surpassed 250GW, while the UK had just 42GW. And, the question remains, are green buildings truly green?

Mr. Saurabh Kumar, Vice President, The Global Energy Alliance for People and Planet (GEAPP), India stated that the energy transition in India is unique, differing significantly from previous global transitions, hence highlighting the relevance of establishing contextual relevance and processes. He further added that without energy growth, economic development cannot be achieved.

Ms. Suhela Khan, Country Programme Manager, Women's Economic Empowerment, UN Women discussed the significant economic opportunities that the energy transition offers. She highlighted the importance of ensuring women are included in the transition through effective policies and interventions; and called for a robust ecosystem approach, where women benefit from the transition, helping them and their communities thrive.

Ms. Srestha Banerjee, Director, Just Transition @ International Forum for Environment, Sustainability & Technology (iFOREST) emphasized that to maintain socio-economic stability, a just transition is fundamental. She further stated that for a country of 1.4 billion people, a transition cannot be afforded unless social and economic stability are ensured.

Plenary Session 3: Together For Tomorrow: Uniting For Climate Action

Chaired by **Mr. Manjeev Singh Puri, Distinguished Fellow at TERI - The Energy and Resources Institute**, this session explored how diverse sectors and generations can come together to take meaningful climate action. Mr. Puri highlighted the importance of water as a critical issue for future generations, stressing that climate action isn't just about energy but also about safeguarding water resources.

Dr. Sukhgeet Kaur, DDG (Cost) & Adviser (Energy), Ministry of Defence of India, emphasized the focus of PSUs on energy efficiency to reduce costs and environmental impacts. She also stressed that quality, timely data is crucial to monitor progress and implement effective policies.

Mr. Anshul Tewari, Founder & CEO, Youth Ki Awaaz, discussed the critical role of empowering youth to lead climate action. He pointed out that the youth have driven major climate movements and underscored the importance of aligning individual actions with broader sustainability goals. He stated, "It's not about you; it's about the youth."

Mr Shailesh Ranjan Gupta, Business Head, Asahi India Glass Limited (AIS), shared insights on low-carbon glass technologies, which are ahead of adoption rates, and noted that every building is unique, requiring tailored sustainable solutions. He also stressed the importance of utilizing glass effectively rather than misusing it.

Mr. Vaibhav Gupta, Associate Director, KPMG India, emphasized the need to translate climate policies into actionable plans. He highlighted the importance of identifying emission hotspots and taking action to address them effectively.

Mr. Prabhakant Jain, Head of CSR, DS Group, reminded everyone to bring the global to the local, ensuring that global solutions are adapted to local contexts for more effective climate action.

Plenary Session 4: Transforming Urban Spaces: Building For Tomorrow

Chaired by **Scientia Professor Deo Prasad AO FTSE CEO, NSW Decarbonisation Innovation Hub, University of New South Wales (UNSW), Sydney** this session focused on creating urban spaces that are resilient, sustainable, and adaptable to future challenges. The panelists shared key insights on addressing gaps in knowledge, capacity, and implementation.

Mr. Rajendra Ratnoo IAS, Executive Director, National Institute of Disaster Management (NIDM) highlighted the need for bridging gaps between communities, academia, and policymakers to effectively disseminate knowledge and build capacities to aid to aid in the development of low carbon urban infrastructure.

Mr. Hemant Bherwani, Senior Scientist, National Environmental Engineering Research Institute (NEERI) The agenda is not to put a halt to development. The agenda is that, while we are developing, we should build climate resilience into it.

Dr. Nupur Bahadur, Associate Director, Circular Economy and Waste Management, TERI - The Energy and Resources Institute If we can adopt circular economy practices, we can address challenges of ULBs for financial sustainability while managing our waste, both solid and liquid, at our level, thereby addressing the larger challenges

Mr. Sharif Qamar, Associate Director, Transport and Urban Governance, TERI - The Energy and Resources Institute stated the need to look at the system in a holistic manner, one thing trickling down to the other and impacting other aspects as well. Emphasis on knowledge transferring into contracting and that contracting transferring to on-ground implementation was stressed upon.

Mr. Sanjay Seth, Vice President & CEO, GRIHA Council emphasized the importance of being receptive to better planning and questioned how to make sustainability operational within the planning process. He further emphasized “Sustainable, resilient, all of these phrases have become buzz words. But then, in terms of its operation, how do we take care of them when we are going through the process of planning.”

Thematic Tracks

Thematic Track 1:Time to Cool Off: Managing Urban Heat Time to Cool Off: Managing Urban Heat

The panel discussion, chaired by **Dr. Vishal Garg, Dean of Research at Plaksha University**, kicked off with a powerful insight: the impact of heatwaves can surpass all other disasters in terms of damage. For example, the Urban Heat Island Effect alone is causing a significant loss of 6% of sleep during the night.

Dr. Manju Mohan, Former Professor, Indian Institute of Technology, Delhi stressed the importance of addressing heat absorption and retention in urban areas—solving one issue can often tackle multiple challenges. By developing green infrastructure, cities can lower temperatures, reduce strain on energy systems, improve public health, and promote environmental sustainability, tackling multiple urban challenges.

Ms. Aarti Nain, Advisor, UN Environment Programme (UNEP), advocated for designing buildings with both passive and active cooling solutions. Transforming urban and community spaces with cool roofs and more vegetation can foster more sustainable and livable environments.

Mr. Chinmaya Acharya, Director - Programs, NRDC India, emphasized the need for energy-efficient buildings that reduce the demand for cooling, promoting sustainability in the process. Promoting sustainable design practices, such as passive cooling strategies, helps create a more eco-friendly, cost-effective, and resilient built environment.

Dr. Anita Gupta, Head, Climate, Energy and Sustainable Technology (CEST) Division, Department of Science & Technology, Government of India, highlighted the importance of multistakeholder collaboration. The government cannot tackle this alone - everyone must come together for effective climate action, with initiatives like awareness and capacity-building programs leading the way.

Ms. Neetu Jain India, Managing Director, Panache Greentech Solutions Pvt Ltd, pointed out the potential of cool roofs through coatings and green roof systems to address urban heat challenges. She further added “To select sustainable roof material, it should have reduced porosity (water dampness), Reflectivity/emissivity-High SRI, good UV Resistance.”

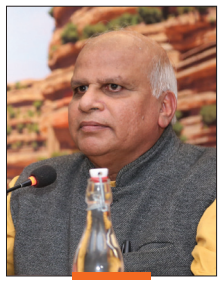
Thematic Track 2: Conservation To Inspiration: Biophilic Designs

A thought-provoking panel chaired by **Ar. Tanya Khanna, Founder of Epistle**, explored how biophilic design can reshape our built environment. Ar. Khanna shared a powerful message: "We, as humans, are avid consumers of nature, yet we do very little to replenish what we take."

Key takeaways from the esteemed panellists:

Dr. G Shankar, Founder and Chairman, Habitat Technology Group - India emphasized: "Nature is a great equalizer—imbibing its qualities into design fosters true conservation." He stressed the importance of understanding the symbiotic relationship between humans, nature, and community.

Ar. Suhasini Ayer-Guigan, Principal Architect, Auroville Design Consultants, Center for Scientific Research, Auroville shared: "Biophilia is not just about nature-inspired forms, but about responding to local biogeography to create resilient, adaptive solutions."



Ar. Yatin Pandya, Principal Architect, Footprints E.A.R.T.H. emphasized that "Biophilic design is not about relying on AI for form and function; it's about the symbiosis between humans and nature." He also reminded us that traditions, though born in the past, remain relevant today in the face of change."

Dr. Hina Zia, Head (Department of Planning) & Professor (Department of Architecture), Jamia Millia Islamia powerfully stated "We need nature, but nature does not need us." "Our existence is intricately tied to the health of the planet, emphasizing the need for environmental stewardship and sustainable practices for future generations."

Thematic Track 3: Navigating Resource Scarcity: New Approaches For Sustainable Construction

The panel, chaired by **Dr. Shailesh Agrawal, Executive Director, Building Materials And Technology Promotion Council (BMTPC), Ministry of Housing and Urban Affairs (MoHUA), Government of India (GoI)** explored innovative strategies for sustainable construction in the face of resource scarcity. He emphasized the need for innovative building technologies and the optimization of key materials like steel, cement, and glazing to achieve sustainability goals.

Mr. Sanjay Pant, Scientist-G & DDG (Standardization-II), Bureau of Indian Standards (BIS) in the Thematic Address for the Session stressed the importance of resilience and durability in construction materials to ensure long-term sustainability. He also highlighted the need for skill development to push forward India's sustainability agenda, noting that a skilled workforce is crucial for effective project management in this sector.

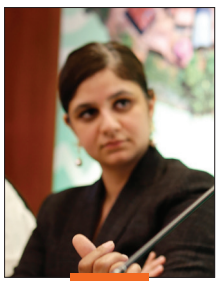
Mr. S.V. Patil, Head - Ready Mix Concrete & Key Accounts, UltraTech Cement discussed the role of policies in enabling sustainable practices, particularly the potential to recycle 100% of municipal waste for construction. He also shared that 80% of UltraTech's concrete production now uses alternative materials, significantly improving both sustainability and durability.

Mr. Sumit Bhatia, Director, ARS Steels & Alloy International Pvt. Ltd, highlighted the company's progress in reducing emissions by using renewable energy. Currently, ARS Steel is using 33% renewable energy, which has lowered emissions to 0.49 tCO2e per ton of steel. With plans to increase this to 85%, they expect to reduce emissions further to 0.21 tCO2e per ton by 2025.

Mr. Anand Santhanam, Executive Director, Saint-Gobain India Private Limited - Glass Business shared the company's commitment to sustainability by transitioning from furnace energy to electrical energy powered by renewable sources. Additionally, 21% of their glazing production now utilizes recycled materials.

Thematic Track 4: Traversing Through Social Strata and Community Based Adaptation

Chaired by **Dr. Priyanka Kochhar, Ph.D., Founder and CEO, The Habitat Emprise**, this insightful session explored the pivotal role of community adaptation and capacity building in tackling climate challenges.



Ms. Zerin Osho Bamezai Raina, Director of the India Program, Institute for Governance & Sustainable Development (IGSD) stressed that capacity building is the cornerstone of effective climate action, with behavioural change being a crucial driver in moving forward with sustainable solutions.

Mr. Mohak Gupta, Assistant Program Director - Circular Economy and Resource Efficiency, Development Alternatives emphasized that capacity building is required across the entire value chain, from policymakers to grassroots communities. He also called for greater community participation in decision-making, noting that those closest to the problem are often best equipped to solve it.

Mr. Jay Kay Thakkar, Associate Professor, Faculty of Design and Head of Exhibition, CEPT University highlighted India's position as a major creative economy within the building industry. He advocated for integrating local building crafts and community knowledge into formal education systems to help students better connect with local identities and empower communities to communicate their traditions.

Ms. Nidhi Anand, Head of Programmes, People's Power Collective pointed out significant policy gaps, particularly those resulting from insufficient preparation. She emphasized that often overlooked soft factors can be key to the success of community-based adaptation. Additionally, she urged a shift from the narrative of empowering communities to one of undergirding and truly supporting them.

Thematic Track 5: Incentives for a Low-Carbon Future

Chaired by **Dr. Dhruba Purkayastha, PhD, Director, Growth and Institutional Advancement, Council on Energy, Environment and Water (CEEW)**, this session focused on the role of green finance and sustainable practices in shaping the future of building and development. The panellists offered valuable perspectives on integrating sustainability into the industry and addressing the challenges of financing green projects.

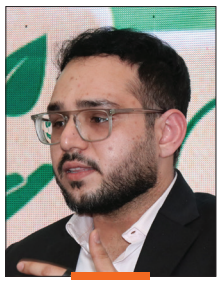
Mr. Saurabh Diddi, Director, Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India emphasized the need to shift the narrative from incentives to a "have to do it at any cost" mindset, with a focus on incentives for building users, like reduced registration costs, to drive adoption of energy-efficient practices.

Ms. Neha Khanna, Senior Manager, Climate Finance, Climate Policy Initiative discussed the long-term benefits of investing in green projects. While the returns may not always be immediate, investing in sustainability is crucial. She also highlighted the challenge of aligning expectations between developers and financiers when it comes to pricing risk and returns.

Ms. Rachika A. Sahay, Equity Partner, Argus Partners (Solicitors & Advocates), pointed out that while the government is working to keep pace with rapidly evolving technologies through regulations and incentives, the fast-moving nature of technology often outpaces policy.

Mr. Sandeep Sonigra, Managing Director, Orange County Group, shared insights on using lime as a sustainable material that can absorb carbon dioxide. He emphasized how, as builders, they are working to replace cement with lime wherever possible.

Mr. Zohaib Siddique, Senior General Manager - Architecture & Design, Whiteland Corporation noted that sustainability is now a fundamental criterion in real estate development. The commercial dynamic of how much can be built while going green is a crucial consideration right from the design phase.



Mr. Archit Batra, Head - New Business Initiatives, FCF India discussed the challenges in the carbon credit market, explaining that the cost of carbon credits varies for each project, and the lack of standardization in pricing is a significant challenge. He also pointed out the complexity of schemes and subsidies in the market.

Thematic Track 6: Elevating Existing Buildings For Sustainability

Chaired by **Ms. Vaishnavi T G Shankar, Lead - Training & Capacity Building, National Institute of Urban Affairs (NIUA)**, this session explored how existing buildings can be adapted and enhanced to meet sustainability goals. The panellists shared valuable insights on innovative strategies for retrofitting and optimizing buildings for a greener future:

Dr. Arun Tripathi, Scientist G, Ministry of New and Renewable Energy (MNRE), Government of India (GoI) highlighted the role of an open-access system to accelerate the transition to greener buildings. He also stressed the importance of designing buildings to accommodate future energy needs, vertical net metering systems, and integrating BIPV (Building Integrated Photovoltaics) installations for greater energy efficiency.

Ms. Nandita Bhatt IAP, Executive Director (Planning), Airport Authority of India (AAI) spoke about the need to prioritize operational and regulatory requirements to effectively drive sustainability. She also emphasized the importance of developing carbon-free airports to push forward sustainable aviation.

Ar. Shamit Manchanda, Founding Partner & Principal Architect, Manchanda Associates discussed the importance of retaining and repurposing existing buildings instead of demolishing them, positioning this as a significant step toward reducing waste and increasing sustainability.

Ms. Samhita Venkaatesh, Founder and Managing Director, Ela Green Buildings & Infrastructure Consultants Pvt Ltd spoke about the integration of IoT systems to monitor energy efficiency and environmental conditions. She also highlighted the potential of integrating solar modules along with humidity and temperature sensors in existing buildings to enhance both energy efficiency and environmental monitoring.

Mr. Sudheer Perla, Managing Director, Asia, Tabreed and Member, Alliance for an Energy-Efficient Economy (AEEE) emphasized the need to adopt cooling as a service, alongside passive interventions. He also highlighted that effective design and diligent operations, and maintenance (O&M) are key to ensuring long-term sustainability outcomes.

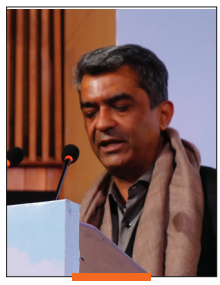
Valedictory Session

The valedictory session was graced by the presence of **Smt Meenakshi Lekhi**, Former Minister of State for External Affairs and Culture, Government of India and Member of Parliament; **Dr Vibha Dhawan**, President, GRIHA Council and Director General, TERI; **Mr Aditya Bhutani**, Director and COO of AIS GlassXperts.

Dr Vibha Dhawan, President, GRIHA Council and Director General, TERI, highlighted the event's overarching vision in her address. "Challenges are inevitable, but what truly matters is how we confront them and drive meaningful, lasting change. While perfection may remain out of reach, the opportunity to embrace sustainability is here, and it is our collective responsibility to seize it for a greener future," she said.

The valedictory session opened with remarks by **Mr Sanjay Seth**, Vice President and CEO, GRIHA Council, and Senior Director, Sustainable Infrastructure Programme, TERI who underscored the critical need for innovation and collaboration. "The conversations we've had, the ideas we've shared, and the solutions we've proposed over these past two days will play a crucial role in transforming our built environment. It is our collective responsibility to leverage our expertise and passion to drive positive change," he stated.

Delivering the valedictory address, **Smt Meenakashi Lekhi**, Former Minister of State for External Affairs and Culture, Government of India and Member of Parliament, called for unified efforts to achieve climate resilience. “We must take control of our green agenda, rooted in our heritage and guided by GRIHA standards, rather than allowing external forces to dictate it. GRIHA represents India’s commitment to sustainability, and by embracing reusing and recycling, we can retrofit existing buildings to meet these green standards. Modern lifestyles, often drive pollution, with excessive consumption posing a significant environmental threat. Our ancient cities, like Harappa, were built in harmony with nature, emphasizing sustainable infrastructure. Today, we must shift our focus back to people-centred, sustainable planning. In this journey, let’s show compassion not only to each other but also to the environment” she said.



Mr Aditya Bhutani, Director and COO of AIS GlassXperts, emphasised the role of partnerships in advancing sustainability. “Achieving net zero is not merely an opportunity, but a crucial reality we must strive for. Furthermore, meaningful change doesn’t always require grand gestures; it is the accumulation of small acts, multiplied by millions, that can ultimately transform the world for the better,” he remarked.

The event concluded with closing remarks by **Ms Shabnam Bassi**, Deputy CEO and Secretary, GRIHA Council, reaffirming the commitment to advancing sustainability through collaboration and innovation.

Side Event

Side Event During the 16th GRIHA Summit

A Side event 'Innovative Sustainable Construction Strategies: Scaling Up Building-Integrated Photovoltaics (BIPV) Applications in India' was hosted by TERI and GRIHA Council during the 16th GRIHA Summit. The event, organised under GIZ India's dPP project in partnership with Ornate Solar, convened critical stakeholders, including government representatives, architects, and developers, to deliberate on barriers, concerns, and opportunities for scaling BIPV technology in India. The dignitaries and panellists shared valuable insights on BIPV adoption, challenges and solutions for developing a sustainable built environment:
Mr. Girish Sethi, Senior Fellow and Senior Director, Energy Program, TERI, commended the collaborative effort, stating, "This collaboration on building-integrated photovoltaics (BIPV) is an exciting and important area that addresses critical challenges in energy and sustainability."

Dr. Mohammad Rihan, Director General of NISE, delivered the keynote address, emphasising the importance of initiating conversations about BIPV to drive its adoption. He stated, "BIPV needs a push in terms of making it a point of discussion. That is the first step in pushing any new thing into society or market. Solar energy has a central role when you talk about fighting the climate change challenge and shifting towards sustainable development."

Ms. Varsha Punhani, Head of HSMI, HUDCO, highlighted the dual challenge and opportunity presented by India's rapid infrastructure development, noting, "The construction and building sector accounts for nearly one-sixth of the nation's total greenhouse gas emissions. 70% of India's infrastructure is yet to be built. This presents both a challenge and an opportunity—a chance to rethink, redesign, and rebuild sustainably."

Special Remarks
Ms. Archana Khanna, Founding Partner of First Principle and Convenor of the Sustainability Committee at IIA Northern Chapter, provided critical insights on accelerating BIPV adoption: "Mass penetration of BIPV must focus on affordable housing, public infrastructure, and inner-city developments...BIPV's performance must account for shading, ventilation needs, and thermal impacts, especially in dense urban environments. Architects need accessible tools and cost calculators to compare BIPV with traditional building materials. Upskilling construction labour is essential to handle the specialised installation of BIPV systems."

Mr. Abhinav Jain, Senior Energy Advisor at GIZ India, highlighted a significant roadblock to BIPV adoption: the lack of data for stakeholders. He remarked, "The major challenges for BIPV in India are the lack of data for industries, regulators, and architects. GIZ's DPV project brings together public and private support to tackle these challenges, leveraging private expertise and government facilitation."

Technical Session
The event also featured international technical presentations to broaden the audience's understanding of global BIPV advancements by Dr. Dieter Moor, CEO and Founder, Arconsol, Mr. Dirk Braunlich, Director of Sales and Business Development Asia, Von Ardenne, Mr. Gazmend Luzi, CEO, Sunage, and Dr. Pierluigi Bonomo, Senior Researcher, SUPSI, Switzerland.

Panel Discussion

A panel discussion moderated **by Daniel Lipschits**, Strategy and Development Director at Sun Appeal India and Esylys LLP, provided a deep dive into challenges and solutions for BIPV uptake. The panel featured insights from **Mr. Gautam Dey**, President of Project Commissioning, Asset Management, Clubs, Interior Fitout, and Event Management, M3M India Pvt. Ltd.; **Hans-Peter Merklein**, Entrepreneur, Unltd Solar; **Mr. Zohaib Siddique**, Senior General Manager, Architecture and Design, Whiteland Corporation, **Mr. Amit Sharma**, Principal Architect, Axiom India; **Mr. Anurag Bajpai**, Director, GreenTree Global; **Mr. CK Verma**, Former Special Director General, CPWD, Government of India; and **Mr. Akash Deep**, Deputy General Manager and Treasurer, GRIHA Council

Conclusion

The session concluded with closing remarks from **Mr. Sanjay Seth, Vice President and CEO**, GRIHA Council and **Senior Director, Sustainable Infrastructure Programme**, TERI. He emphasized viewing challenges as opportunities, with a call to establish BIPV as a new norm in the industry.

GRIHA Felicitation Ceremony

List Of GRIHA Rating Awards & Water Positive Certification Award

Sl. No.	Name of the project	Location	Rating Star	Rating variant
1	AIPL Joy Central & Signature Tower	Gurugram, Haryana	4 Star	GRIHA Provisional Rating
2	Multi Storied 'C' Type Apartments - Bharat Electronics	Bengaluru, Karnataka	4 Star	GRIHA Provisional Rating
3	Construction of Civil Aviation Research Organisation (CARO) Complex	Begumpet Airport, Phase-I, Hyderabad	5 Star	GRIHA Provisional Rating
4	EROS Healthcare Pvt Ltd	Karnal, Haryana	3 Star	GRIHA Provisional Rating
5	Construction of 76 Nos. Multi-Storied Flats for Honorable Members of Parliament of Lok Sabha	at B.D. Marg New Delhi	3 Star	GRIHA Provisional Rating
6	Garvi Gujarat	New Delhi	3 Star	GRIHA Provisional Rating
7	General Pool Office Accommodation 2 at KG Marg	New Delhi	4 Star	GRIHA Provisional Rating
8	Construction of Infrastructure at 02 BN NDRF at Haringhata	West Bengal	3 Star	GRIHA Provisional Rating
9	Construction of SS Block in Karnataka Institute of Medical Sciences (KIMS)	Hubballi, Karnataka under PMSSY Ph-III Scheme	3 Star	GRIHA Provisional Rating
10	Mahindra Centralis	Pune, Maharashtra	3 Star	GRIHA Provisional Rating
11	Marine Square	Village Dhankot, Sector 102, Gurugram, Haryana, Licence No 99 of 2014	4 Star	GRIHA Provisional Rating

Sl. No.	Name of the project	Location	Rating Star	Rating variant
12	Married Accommodation Complex at Delhi Cantt.	New Delhi	3 Star	GRIHA Provisional Rating
13	Multilevel Car Parking at Jail Road	Puri, Odisha	3 Star	GRIHA Provisional Rating
14	National Institute of Homoeopathy	Delhi	3 Star	GRIHA Provisional Rating
15	Construction of OPD Block, AIIMS - Nagpur	Maharashtra	3 Star	GRIHA Provisional Rating
16	Redevelopment of General Pool Residential Colony at Mohammadpur	New Delhi 110066	3 Star	GRIHA Provisional Rating
17	Construction of Residential Blocks, AIIMS - Nagpur	Maharashtra	3 Star	GRIHA Provisional Rating
18	Super Specialty Block, Gauhati Medical College	Guwahati, Assam	3 Star	GRIHA Provisional Rating
19	Type B Quarters (B-25) Residential Building at IIT Bombay	Mumbai, Maharashtra	3 Star	GRIHA Provisional Rating
20	Hostel-18 at IIT Bombay	Mumbai, Maharashtra	3 Star	GRIHA Provisional Rating
21	Construction of Super Speciality Block at Government Medical College	Kozhikode (Kerala) Under PMSSY (Phase - III)	3 Star	GRIHA Provisional Rating
22	Manipal School of Architecture and Planning	Manipal, Udupi - Karnataka	4 Star	GRIHA Provisional Rating
23	Metro World Mall	Gurugram, Haryana	3 Star	GRIHA Provisional Rating
24	Indian Institute of Management Sambalpur	Odisha	4 Star	GRIHA Provisional Rating
25	Convention Centre and Technology Incubation Park	Indian Institute of Technology Hyderabad, Telangana	3 Star	GRIHA Provisional Rating
26	Campus School	Indian Institute of Technology Hyderabad, Telangana	3 Star	GRIHA Provisional Rating
27	International Guest House	Indian Institute of Technology Hyderabad, Telangana	3 Star	GRIHA Provisional Rating

Sl. No.	Name of the project	Location	Rating Star	Rating variant
28	Boys Hostel and Dining Hall	Indian Institute of Technology Hyderabad, Telangana	3 Star	GRIHA Provisional Rating
29	IIT Madras, Mandakini Hostel	Chennai, Tamil Nadu	3 Star	GRIHA Provisional Rating
30	Construction of New Integrated Terminal Building & Associated Works at Agartala Airport	Agartala, Tripura	4 Star	GRIHA Provisional Rating
31	Regional Directorate cum Laboratory	Bhopal, Madhya Pradesh	4 Star	GRIHA Provisional Rating
32	Sports and Cultural Centre	Indian Institute of Technology, Hyderabad	3 Star	GRIHA Provisional Rating
33	Hospital, Medical & Nursing College, Ayush and Auditorium Buildings	at All India Institute of Medical Sciences, Gorakhpur, Uttar Pradesh	3 Star	GRIHA Final Rating
34	Indraprastha Institute of Information Technology Delhi	Academic Block and Seminar Block, Okhla Ph- III , New Delhi	4 Star	GRIHA Final Rating
35	The Crest, DLF Phase 5, Sector 54	Gurugram, Haryana 122009	3 Star	GRIHA Final Rating
36	AIIMS Bilaspur	Himachal Pradesh	3 Star	GRIHA LD - Phase 1
37	Indian Institute of Technology Tirupati Campus	Andhra Pradesh	4 Star	GRIHA LD - Masterplan
38	National Academy Of Customs, Indirect Taxes & Narcotics (NACIN) Campus	Palasamudram, Andhra Pradesh	5 star	GRIHA LD - Masterplan
39	Bhagalpur Divisional Office, LIC of India, Jeevan Prakash Building	Bhagalpur-813201, Bihar	3 Star	GRIHA EB
40	Bharat Petroleum QA Lab Budge Budge	Kolkata, West Bengal	4 Star	GRIHA EB
41	Guwahati Divisional Office Building, “Jeevan Prakash”	Life Insurance Corporation of India, SS Road, Fancy Bazar, Guwahati 781001	4 Star	GRIHA EB
42	East Central Zonal Office, LIC of India, Jeevan Deep Building	Patna, Bihar	3 Star	GRIHA EB
43	Hailakandi Branch Office Building Life Insurance Corporation of India	Old Hospital Road, Hailakandi-788151, Assam	5 Star	GRIHA EB
44	HCL Tech– Madurai Campus	Tamil Nadu	4 Star	GRIHA EB
45	Kolkata Metropolitan Divisional Office –II, “Jeevan Tara”, Life Insurance Corporation of India	23 A/ 44X,Diamond Harbour Road , Kolkata-700053, West Bengal	4 Star	GRIHA EB
46	LIC of India, Divisional Office, Jeevan Prakash	Aurangabad, Maharashtra	4 Star	GRIHA EB
47	LIC Branch Office	Shikohabad, Uttar Pradesh	3 Star	GRIHA EB

Sl. No.	Name of the project	Location	Rating Star	Rating variant
48	Zonal Training Centre, Jeevan Vidya, LIC of India, Northern Zone	Gurugram, Haryana	4 Star	GRIHA EB
49	Patna Divisional Office-1, LIC of India, Jeevan Prakash Building	Patna, Bihar	3 Star	GRIHA EB
50	Patna Divisional Office - II, LIC of India, Jeevan Ganga Building	Patna, Bihar	3 Star	GRIHA EB
51	World Wide Fund for Nature India	New Delhi	3 Star	GRIHA EB
52	LIC of India, Jeevan Vidya, Zonal Training Centre, Southern Zone	Ambattur, Chennai, Tamil Nadu	3 Star	GRIHA EB
53	Zonal Training Centre, Jeevan Vidya, Akurdi, Pune - LIC of India	WZO, Mumbai, Akurdi, Pune, Maharashtra	4 Star	GRIHA EB
54	Indian Oil Corporation Limited, Punjab State Office	Sector 19-A, Chandigarh	4 Star	GRIHA EB
55	India Habitat Centre	Lodhi Road, New Delhi	4 Star	GRIHA EB
56	Ludhiana Divisional Office Bldg., LIC of India, Northern Zone	Ludhiana, Punjab	3 Star	GRIHA EB
57	GPRA Residential Complex	East Kidwai Nagar, New Delhi-110023	3 Star	GRIHA EB
58	Office Complex	East Kidwai Nagar, New Delhi-110023	3 Star	GRIHA EB
59	Construction of Girls Hostel at Sainik School	Satara, Maharashtra	4 Star	SVAGRIHA
60	Construction of Branch Office LIC of India Building with Modernization	Garhbeta, Dist.- Paschim Medinipur, West Bengal	4 Star	SVAGRIHA
61	Construction of Residential Building of 3 Nos. of 3 BHK Flats for Canara Bank	# 221, RMV Extension , Dollars Colony, Bengaluru, Karnataka	3 Star	SVAGRIHA
62	LIC of India, Branch Office	Nileshwar Under Kozhikode Division, Kerala	4 Star	SVAGRIHA
63	LIC of India, Branch Office	Wadakancherry Under DO Thrissur, Kerala	4 Star	SVAGRIHA
64	LIC of India, Branch Office II, Kollam under Trivandrum Division	Kollam, Kerala	4 Star	SVAGRIHA
65	Construction of Pathogen Screening Laboratory at RGCA Head Quarters	Sirkazhi, Tamil Nadu	2 Star	SVAGRIHA
66	Sahitya Akademi	Bangalore, Karnataka	3 Star	SVAGRIHA
67	Visvesvarayya Utility Building, NITPY Campus, Thiruvettakudy	Karaikal, Puducherry	4 Star	SVAGRIHA
68	New Health Unit at Dehradun Railway Station, Uttarakhand	in Moradabad Division (Northern Railway)	4 Star	SVAGRIHA
69	Construction of Inter Modal IWT Terminal at Kalughat- Bihar	for Capacity Augmentation of National Waterway-1 (River Ganga)	5 Star	SVAGRIHA
70	Milestone Indigo	Surat, Gujarat	2 Star	SVAGRIHA
71	Modern Public School	B Block, Shalimar Bagh, Delhi	4 Star	Existing School
72	ABB India Limited	Peenya, Bengaluru, Karnataka	1.05	Water Positive Certification

List of GRIHA Exemplary Awards

Exemplary Performance Award for GRIHA				
S.No	**Category**	**Project Name**	**Registered Under**	**Result**
1	**Passive Architecture Design**	Income Tax Office, Bhopal	GRIHA	2nd Runner-up
		New Greenfield Airport at Dholera, Ahmedabad, Gujarat	GRIHA	1st Runner-up
		GST Building, Ghaziabad, Uttar Pradesh	GRIHA	Winner
2	**Sustainable Building Materials**	Nalanda University Phase II Rajgir, Nalanda, Bihar	GRIHA LD	Winner
		D2O HQ, Jaipur	SVAGRIHA	
3	**Integrated Water management**	Eco-Tourism Pilgrimage Complex, Dodak, West Sikkim	GRIHA	2nd Runner-up
		The Woods, Godrej City Panvel- Phase 01, Maharashtra	GRIHA	1st Runner-up
		Thal Sena Bhawan at Delhi Cantt	GRIHA	Winner
4	**Energy Management**	Khanchendzonga State University, Sikkim	GRIHA	Winner
5	**Site management (During Construction)**	280 bedded Satellite Centre of AIIMS Rishikesh at Udham Sigh Nagar (Uttarakhand)	GRIHA	2nd Runner-up
		Dhemaji Medical College, Assam	GRIHA	1st Runner-up
		IISc Medical School Foundation, Bengaluru	GRIHA	Winner
		Executive Enclave,New Delhi	GRIHA	Winner
6	**Construction Worker's Health and Safety (During Construction)**	Construction Of 132 Nos GADP Type- II Quarters At Old Kalyan Mandap In Unit-VIII, Bhubaneswar	GRIHA	2nd Runner-up
		Chhindwara Institute of Medical Science & Other Buildings Phase 1, Madhya Pradesh	GRIHA	1st Runner-up
		Common Central Secretariat Building 1,2 & 3, New Delhi	GRIHA	Winner
Exemplary Performance Award for Existing Building				
7	**GRIHA Existing Building Awards**	Pushpangan, Noida	-	1st Runner-up
		Jio World Centre, Mumbai	-	Winner
Exemplary Performance Award for Existing School				
8	**GRIHA Existing School Awards**	Bharatiya Vidya Bhavan's Atmkuri Ramrao School, Jubilee Hills, Hyderabad		2nd Runner up
		Shri Ram Shiksha Mandir, New Delhi	-	1st Runner-up
		Scholars Global School, Bahadurgarh, Haryana	-	Winner

Shape Design Challenge

GRIHA Council organized an architecture design competition SHAPE (Sustainable Habitats Associating People with Environment) Design Trophy as part of the ZEMACH 2024 International Conference in collaboration with the Vellore Institute of Technology and ZEMACH Network on 8-9 November 2024. The winners of the SHAPE Design Challenge were presented awards during the 16th GRIHA Summit.

S.No.	NAME	CATEGORY OF AWARDS
1	ARCS DESIGN STUDIO	Winner
2	Sriram Ramakrishnan - FHD India	Special Mention
3	Ar. Yogesh Chandrahasan and Ar. Madhumitha	Special Mention

GRIHA NASA Trophy 2024

The GRIHA Trophy, at the NASA Convention (National Association for Students of Architecture), encourages future architects to embrace sustainability in design. NASA India, a unique student body association, represents undergraduate architecture students across the nation.

This year, for the 66th NASA Convention, the GRIHA Trophy brief challenged participants to design a Multifunctional Promenade in Puri, Odisha. The goal was to create a transformative space that blends cultural heritage with modern functionality, emphasizing environmental resilience, inclusivity, and resource-efficient practices. The vision was to foster community well-being while driving socio-economic growth in harmony with GRIHA guidelines.

S.No.	NAME OF THE WINNER	CATEGORY OF THE AWARD
1	Z102 - Indian Institute of Technology, Roorkee	Special Mention 3
2	Z524 - School of Planning and Architecture Vijayawada	Special Mention 2
3	Z603 - Department of Architecture, National Institute of Technology Tiruchirappalli	Special Mention 1
4	Z301 - Visvesvaraya National Institute of Technology, VNIT Nagpur, Maharashtra	Citation

Griha Exhibition Design Competition Winners

S.No.	NAME	CATEGORY OF AWARDS
1	ARCS DESIGN STUDIO	Winner
2	Studio Vipodha LLP.	Special Mention

GRIHA in News

- https://theprint.in/ani-press-releases/16th-griha-summit-2024-inaugurated-to-foster-climate-action-in-the-built-environment/2388192/
- https://www.business-standard.com/content/press-releases-ani/16th-griha-summit-2024-inaugurated-to-foster-climate-action-in-the-built-environment-124120500373_1.html#%3A~%3Atext%3D16th%20GRIHA%20Summit%202024%20Inaugurated%20to%20Foster%20Climate%20Action%20in%20the%20Built%20Environment%2C-Shashwat%20magazine%20launch%26text%3DNew%20Delhi%20%5BIndia%5D%2C%20December%2CAction%20in%20the%20Built%20Environment%22
- https://aninews.in/news/business/16th-griha-summit-2024-inaugurated-to-foster-climate-action-in-the-built-environment20241205105157/
- https://www.britishcolumbiatimes.com/news/16th-griha-summit-2024-inaugurated-to-foster-climate-action-in-the-built-environment20241205105039/
- https://www.dailyprabhat.com/16th-griha-summit-2024-inaugurated-to-foster-climate-action-in-the-built-environment/
- https://m.dailyhunt.in/news/india/english/newsvoir-epaper-newsvoir/16th%2Bgriha%2Bsummit%2B2024%2Binaugurated%2Bto%2Bfoster%2Bclimate%2Baction%2Bin%2Bthe%2Bbuilt%2Benvironment-newsid-n642027964?listname=newspaperLanding&topic=business&index=0&topicIndex=0&mode=pwa
- https://news8plus.com/16th-griha-summit-2024-inaugurated-to-foster-climate-action-in-the-built-environment/

For more information, please visit: https://www.grihaindia.org/grihasummit/press-release.php

GRIHA Council - Green Rating for Integrated Habitat Assessment
3rd Floor, Core 1B, India Habitat Centre, Lodhi Rd, Institutional Area,
Lodi Colony, New Delhi, Delhi 110003