



**15<sup>th</sup> GRIHA Summit 2023**

# **Empowering Sustainable and Resilient Communities**

**SUMMIT PROCEEDINGS**

**November 23<sup>rd</sup>-24<sup>th</sup>, 2023 | New Delhi**



# Team at GRIHA Council



# The 15<sup>th</sup> GRIHA Summit

'GRIHA Council', recognized as the 'National Rating System for Green Buildings in India', was developed by The Energy and Resources Institute (TERI) in support with 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 also recognized 'GRIHA' as a tool to evaluate greenhouse gas (GHG) reduction from habitats under its obligations to mitigate climate change as contained in the 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 which are 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 Council's prominent affiliations are with esteemed entities including the Ministries of Housing & Urban Affairs, Power, New and Renewable Energy; Bureau of Energy Efficiency; Life Insurance Corporation of India; Indian Oil Corporation Limited; Bhopal Smart City Development Corporation Limited; Government of Maharashtra; Uttar Pradesh; Andhra Pradesh; European Union; Royal Danish Embassy; 2000-Watt Smart Cities Association; DLF; AIS; JSW Cement; Mahindra Lifespaces Developers Limited; JK Cement Limited; Saint Gobain; Larsen & Toubro; Sheffield Hallam University; UNSW Sydney; Council of Architecture; National Institute of Urban Affairs. The past summits had been designed on the themes such as "Approach to Integrated Sustainability", "Fostering Partnerships for Sustainable Habitats", "Transforming Habitats", "Sustainable is Affordable", "Rejuvenating Resilient Habitats", "Restoring Green Economy", and "Towards Net Positive Habitats".

The **15<sup>th</sup> GRIHA Summit** was scheduled on **23<sup>rd</sup> and 24<sup>th</sup> November 2023** at **India Habitat Centre, Lodhi Road, New Delhi, India** on the theme '**Empowering Sustainable and Resilient Communities.**'

The theme of this year's summit, therefore, aimed to create a better future for all by empowering communities for resilience and sustainability to cope with the adverse impacts of accelerated climate change. It intended to highlight the crucial interdependence of all forms of life for the very sustenance of life on Mother Earth. This summit was aligned with the concept of 'LiFE – Lifestyle for Environment' introduced by the Hon'ble Prime Minister of India at COP26, that resonated with India's vision of a safe planet through 'mindful and deliberate utilization'. The overarching aim was to bring everyone together to identify the role of every individual in creating a sustainable community and move ahead in creating a cleaner, greener, and more sustainable planet.

# Acknowledgements

At the outset, GRIHA Council would like to extend our deepest gratitude to **Hon'ble Prime Minister of India, Shri Narendra Modi** for his inspiring message shared on the occasion of 15th GRIHA Summit and published in the annual magazine, "Shashwat – Let Nature Be".

We are extremely thankful to the distinguished individuals who graced the event with their esteemed presence: **Smt. Leena Nandan**, Secretary, Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India; **H. E. Mr Freddy Svane**, Ambassador, Royal Danish Embassy, New Delhi, India; **Dr Ajay Mathur**, Director General, International Solar Alliance (ISA); **Shri Pramod Kumar Tiwari**, Director General, Bureau of Indian Standards (BIS), Ministry of Consumer Affairs, Food & Public Distribution, Government of India; **Prof. Sunaina Singh**, Former Vice Chancellor, Nalanda University; **Mr Greg Kats**, Founder and CEO, Smart Surfaces Coalition; **Ms Dipa Bagai**, Director, NRDC India Private Limited; **Prof. (Ar.) Abhay Vinayak Purohit**, President, Council of Architecture (COA); and **Mr Sameer Pandey**, I.R.S., Joint Commissioner [Admin], Navodaya Vidyalaya Samiti, Ministry of Education, Government of India.

Special gratitude to all our **honourable session chairpersons and speakers** for their insightful contributions across various facets of sustainability. The realization of the 15th GRIHA Summit was made possible through the unwavering support of our partners, including **government partners, bilateral and multilateral partners, real estate partners, knowledge partners, associate partners, exhibition partners, theme partners, institutional partners, prelude partners, and media partners**. Special thanks to Tata BlueScope Steel, Studio Shunya, Baans Infra for putting up their innovative exhibitions.

Our sincere appreciation is also extended to the dedicated staff of the India Habitat Centre and the TERI fraternity, whose unyielding cooperation played a pivotal role in the seamless organization of the 15th GRIHA Summit 2023.

The success of the event was further enriched by the active participation and engagement of our esteemed participants, who contributed to a plethora of enriching discussions. We express our heartfelt thanks to all participants and guests for their invaluable role in making the event a success.

Lastly, we convey our profound gratitude and admiration for the visionary leadership provided by **Dr Vibha Dhawan**, President, GRIHA Council, and Director General, TERI, whose commitment has guided us on a journey towards a greener India.

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# Agenda

<b>Curtain Raiser Reception</b> <b>22<sup>nd</sup> November, 2023 (Wednesday)</b> <i>Venue: Hyatt Regency, Bhikaji Cama Place, New Delhi, India</i>	
<b>1800 hrs onwards</b>	Curtain Raiser Reception <ul style="list-style-type: none"> <li>• <b>Lighting the Lamp</b></li> <li>• <b>Welcome Address</b></li> <li>• <b>Opening Remarks</b></li> <li>• <b>Special Address</b></li> <li>• <b>Release of</b> <ul style="list-style-type: none"> <li>» GRIHA Annual Magazine 'Shashwat - Let Nature Be'</li> <li>» GRIHA for Existing Schools Manual Version 3</li> </ul> </li> <li>• <b>Keynote Address</b></li> <li>• <b>Signing of Memorandum of Understanding (MoU)</b> <ul style="list-style-type: none"> <li>» Natural Resources Defense Council (NRDC) and NRDC India</li> <li>» Smart Surfaces Coalition (SSC)</li> <li>» Navodaya Vidyalaya Samiti (NVS)</li> </ul> </li> <li>• <b>Felicitation Ceremony:</b> <ul style="list-style-type: none"> <li>» Award of GRIHA Ratings &amp; Certification</li> <li>» GRIHA Award of Recognition</li> </ul> </li> <li>• <b>Dinner Reception</b></li> </ul>
<b>Day 1</b> <b>23<sup>rd</sup> November, 2023 (Thursday)</b> <i>Venue: India Habitat Centre, Lodhi Road, New Delhi, India</i>	
<b>0830 – 0930 hrs</b>	<b>Registration</b>
<b>0930 – 1000 hrs</b>	<b>Inauguration of GRIHA Exhibition – “Vikalp”</b>
<b>1000 – 1130 hrs</b>	<b>Inaugural Session (Stein Auditorium):</b> <ul style="list-style-type: none"> <li>• <b>Lighting the Lamp</b></li> <li>• <b>Welcome Address</b></li> <li>• <b>Special Address</b></li> <li>• <b>Launch of GRIHA Rating for Interior Spaces Version 1.0 (GRIHA InS)</b></li> <li>• <b>Inaugural Address</b></li> <li>• <b>Felicitation Ceremony</b> <ul style="list-style-type: none"> <li>» Award of GRIHA Ratings</li> <li>» GRIHA Awards of Recognition</li> </ul> </li> <li>• <b>GRIHA Updates</b></li> </ul>
<b>1130 – 1200 hrs</b>	<b>Networking over Tea/coffee</b>
<b>1200 – 1330 hrs</b>	<b>Plenary Session I: Earth’s Critical Zones: Restoring Harmony (Stein Auditorium)</b>

1330 – 1430 hrs	<b>Networking Lunch</b>		
1430 – 1600 hrs	<b>Parallel Sessions</b>		
	<b>Thematic Track 1</b> (Silver Oak Hall)	<b>Thematic Track 2</b> (Magnolia Hall)	<b>Thematic Track 3</b> (Jacaranda Hall)
	<i>Growth through Sustainable Infrastructure</i>	<i>Cultural Identity in the Built Fabric</i>	<i>Circularity in Indigeneity</i>
1600 – 1630 hrs	<b>Networking over Tea/Coffee</b>		
1630 – 1800 hrs	<b>Plenary Session II: Rebuilding Communities: Disaster to Resilience</b> (Silver Oak Hall)		
<b>End of Day 1</b>			

<b>Day 2</b> 24 <sup>th</sup> November, 2023 (Friday) Venue: India Habitat Centre, New Delhi			
1000 – 1130 hrs	<b>Plenary Session III: Influencing through Influencers</b> (Silver Oak Hall)		
1130 – 1200 hrs	<b>Networking over Tea/Coffee</b>		
1200 – 1330 hrs	<b>Parallel Sessions</b>		
	<b>Thematic Track 4</b> (Silver Oak Hall)	<b>Thematic Track 5</b> (Magnolia Hall)	<b>Thematic Track 6</b> (Jacaranda Hall)
	<i>Role of Local Economies</i>	<i>Targeting the 2070 Workforce</i>	<i>Inclusivity in Diversity</i>
1330 – 1430 hrs	<b>Networking Lunch</b>		
1430 – 1600 hrs	<b>Parallel Sessions</b>		
	<b>Thematic Track 7</b> (Silver Oak Hall)	<b>Thematic Track 8</b> (Magnolia Hall)	<b>Thematic Track 9</b> (Jacaranda Hall)
	<i>Clean Energy, Green Communities</i>	<i>Changing Consciousness and Building Market</i>	<i>Decoding Sustainable Fashion</i>
1430 – 1600 hrs	<b>GRIHA NASA India Event – Celebrating 10 years of GRIHA Trophy at NASA India</b> (Silver Oak Patio)		
1600 – 1630 hrs	<b>Networking over Tea/Coffee</b>		
1630 – 1800 hrs	<b>Plenary Session IV: Preparedness for Climate Change: Where India Stands</b> (Stein Auditorium)		
1800 – 1930 hrs	<ul style="list-style-type: none"> <li>• <b>Valedictory Session &amp; Award Evening (Stein Auditorium):</b></li> <li>• <b>Welcome Address</b></li> <li>• <b>Special Address</b></li> <li>• <b>Release of 'GRIHA's Impactful 50 - Beyond Green Building Blocks' book</b></li> <li>• <b>Valedictory Address</b></li> <li>• <b>Felicitation Ceremony</b> <ul style="list-style-type: none"> <li>» Award of GRIHA Ratings</li> <li>» GRIHA Exemplary Awards</li> </ul> </li> <li>• <b>Vote of Thanks</b></li> </ul>		
1945 – 2000 hrs	<b>Setting the Stage</b>		
2000 – 2030 hrs	<b>Cultural Evening</b>		
2030 hrs onwards	<b>Dinner Reception (Charminar)</b>		
<b>Closing of 15<sup>th</sup> GRIHA Summit</b>			

# DETAILED AGENDA

Curtain Raiser Reception 22 <sup>nd</sup> November, 2023 (Wednesday) Venue: Hyatt Regency, Bhikaji Cama Place, New Delhi, India	
1800 hrs onwards	<p><b>'Setting the Theme' followed by Dinner Reception</b></p> <ul style="list-style-type: none"> <li>• <b>Lighting the Lamp</b></li> <li>• <b>Welcome Address - Mr Sanjay Seth</b>, Vice President and Chief Executive Officer, GRIHA Council and Senior Director, The Energy and Resources Institute (TERI)</li> <li>• <b>Opening Remarks - Dr Vibha Dhawan</b>, President, GRIHA Council and Director General, The Energy and Resources Institute (TERI)</li> <li>• <b>Special Address - Mr Greg H Kats</b>, Founder and CEO, Smart Surfaces Coalition</li> <li>• <b>Special Address - Ms Dipa Bagai</b>, Director, NRDC India Private Limited</li> <li>• <b>Special Address - Mr Sameer Pandey, IRS</b>, Joint Commissioner [Admin], Navodaya Vidyalaya Samiti, Ministry of Education, Government of India</li> <li>• <b>Release of</b> <ul style="list-style-type: none"> <li>» GRIHA Annual Magazine 'Shashwat - Let Nature Be'</li> <li>» GRIHA for Existing Schools Manual Version 3</li> </ul> </li> <li>• <b>Keynote Address - Prof. Sunaina Singh</b>, Former Vice Chancellor, Nalanda University</li> <li>• <b>Signing of MoUs</b> <ul style="list-style-type: none"> <li>» Natural Resources Defense Council (NRDC) and NRDC India</li> <li>» Smart Surfaces Coalition (SSC)</li> <li>» Navodaya Vidyalaya Samiti (NVS)</li> </ul> </li> <li>• <b>Felicitation Ceremony</b> <ul style="list-style-type: none"> <li>» Award of GRIHA Ratings &amp; Certification</li> <li>» GRIHA Award of Recognition</li> </ul> </li> <li>• <b>Vote of Thanks - Ms Shabnam Bassi</b>, Deputy CEO &amp; Secretary-cum-Treasurer, GRIHA Council and Director, The Energy and Resources Institute (TERI)</li> <li>• <b>Dinner Reception</b></li> </ul>

<b>Day 1</b> <b>23<sup>rd</sup> November, 2023 (Thursday)</b> <i>Venue – India Habitat Centre, Lodhi Road, New Delhi</i>	
0830 – 0930 hrs	<b>Registrations</b>
0930 – 1000 hrs	<b>Inauguration of GRIHA Exhibition - “Vikalp”</b>
1000 – 1130 hrs	<b>Inaugural Session</b> Venue – Stein Auditorium <ul style="list-style-type: none"> <li>• <b>Lighting the Lamp</b></li> <li>• <b>Welcome Address - Dr Vibha Dhawan</b>, President, GRIHA Council and Director General, TERI</li> <li>• <b>Special Address - Prof. Ar. Abhay Vinayak Purohit</b>, President, Council of Architecture (COA)</li> <li>• <b>Launch of GRIHA Rating for Interior Spaces Version 1.0 (GRIHA INs)</b></li> <li>• <b>Inaugural Address - Shri Pramod Kumar Tiwari</b>, Director General, Bureau of Indian Standards (BIS), Ministry of Consumer Affairs, Food &amp; Public Distribution, Government of India</li> <li>• <b>Felicitation Ceremony</b> <ul style="list-style-type: none"> <li>» Award of GRIHA Ratings</li> <li>» GRIHA Awards of Recognition</li> </ul> </li> <li>• <b>Vote of Thanks - Mr Sanjay Seth</b>, Vice President and Chief Executive Officer, GRIHA Council and Senior Director, TERI</li> <li>• <b>GRIHA Updates</b></li> </ul>
1130 – 1200 hrs	<b>Networking with Tea/Coffee</b>
1200 – 1330 hrs	<b>Plenary Session I – Earth’s Critical Zones: Restoring Harmony</b> Venue - Stein Auditorium <p><i>Balance and harmony are best learnt from mother nature in the ways she ensures peaceful coexistence of all lives on Earth. Human encroachment, soon turning into invasiveness, is breaking this harmony as we commodify this planet and irrationally exploit natural reserves. This has put the world’s critical areas such as the Arctic, Amazon forests, eastern Himalayas and Western Ghats in great danger. Anthropogenic pressure on these areas is causing ‘irreversible’ damage to the environment which will be lethal to life on Earth. The impacts are not just witnessed as erratic weather patterns but also as catastrophic health disasters. It is high time we see these natural assets beyond their economic value and start rebuilding the harmonic relationship between all living and non-living communities existent on this planet. This session deliberates on the status of such critical world areas, climate-induced natural disasters and the future developmental agenda specific to these regions and around.</i></p> <b>Chair - Mr Hitesh Vaidya</b> , Former Director, National Institute of Urban Affairs (NIUA) <b>Speakers-</b> <ul style="list-style-type: none"> <li>• Dr Anil Kumar Bhardwaj, Scientist - F, Wildlife Institute of India</li> <li>• Mr Ashish Chaturvedi, Head - Action for Climate and Environment, UNDP India</li> <li>• Ms Raina Singh, Deputy Regional Director, South and West Asia, C40 Cities</li> <li>• Ms Neha Sinha, Head, Policy and Communications, WWF-India</li> </ul> Q&A Session
1330 – 1430 hrs	<b>Networking Lunch</b>

Parallel Tracks	
1430 – 1600 hrs	<p><b>Thematic Track 1 – Growth through Sustainable Infrastructure</b> Venue – Silver Oak Hall</p> <p><i>Infrastructure is an indispensable catalyst for economic growth and societal development. It encompasses various essential services such as transportation systems, electricity-generation, and hydropower facilities, as well as water supply and hygiene networks. However, it is imperative that this infrastructure is sustainable and of high quality. By providing a sturdy foundation, it not only contributes to enhancing economic, social, and environmental conditions but also fosters inclusive growth and equitable opportunities for all. By exploring the interdependencies between infrastructure and community well-being, this Session seeks to emphasize the significance of adopting sustainable practices in infrastructure planning, design, and implementation.</i></p> <p><b>Keynote Address - Shri Satyajeet Rajan</b>, Chief Executive Officer, KIIFCON Private Limited <b>Chair - Mr Shri Prakash</b>, Distinguished Fellow, Transport and Urban Governance Division, TERI, New Delhi, India</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Ar. Ashok B Lall, Founder and Principal Architect, Ashok B Lall Architects</li> <li>• Mr Alok Kumar, General Manager (Technical), National Highways Authority of India (NHAI), Government of India</li> <li>• Ms Amita Pathria, Sanitation Specialist- Policy and Technical Support, WaterAid India</li> <li>• Mr Gaurav Yadav, Assistant General Manager (Arch), Airports Authority of India</li> </ul> <p>Q&amp;A Session</p>
1430 – 1600 hrs	<p><b>Thematic Track 2 – Cultural Identity in the Built Fabric</b> Venue – Magnolia Hall</p> <p><i>Culture and heritage play a decisive role in creating a sustainable built environment for thriving communities. This session will delve into the impact of embracing traditional practices, architectural styles, and indigenous knowledge to create spaces that are not only environmentally responsible but also socially and culturally meaningful. By integrating local wisdom and materials, we can foster a sense of belonging and community pride, strengthening the connection between people and their environment. This session aims to focus on the vital connection between culture, heritage, and the empowerment of sustainable communities, envisioning a future that embraces the past while addressing contemporary needs.</i></p> <p><b>Chair - Ar. Gaurav Shorey</b>, Director, Psi Energy Pvt. Ltd.</p> <p><b>Speakers-</b></p> <ul style="list-style-type: none"> <li>• Dr Shikha Jain, Director – Preservation and Community Design, Development and Research Organisation for Nature, Arts and Heritage (DRONAH)</li> <li>• Dr Sanghamitra Basu, Member, Advisory Committee, Architectural Heritage Division, INTACH, New Delhi &amp; Retired Associate Professor, Department of Architecture &amp; Regional Planning, Indian Institute of Technology Kharagpur</li> <li>• Mr Anurag Bajpai, Director, GreenTree Global</li> <li>• Mr Sameer Joshi, Senior Vice President, Head - B2B, Godrej Interio</li> </ul> <p>Q&amp;A Session</p>

1430 – 1600 hrs	<p><b>Thematic Track 3 – Circularity in Indigeneity</b> Venue – Jacaranda Hall</p> <p><i>Retrospection of the lifestyle contrast between today and a few decades ago shows one glaring difference, i.e., undeniably the standard of living. But the other is how minimalism and circularity were not just concepts or strategies, but a way of life. Even today, the rural areas are generating much less waste by maximizing end-to-end utilization of resources.</i></p> <p><i>In a broader context of circularizing the economy, instead of spreading the widespread adaptation of concepts that are not local, we should look into rural set-ups and try replicating to expand those concepts in urban settings.</i></p> <p><i>The primary objective of the Session is to explore and promote the adoption of circular economy principles in urban areas, while encouraging the same in rural set-up, highlighting its potential in fostering sustainable development, bolstering economic resilience, and conserving natural resources. The Session will specifically address the challenges and opportunities unique to the concept of circularity in the rural setting, and how this can be replicated into the urban settings as well. The Session also aims to identify pragmatic strategies for effectively implementing circular economy practices across the nation.</i></p> <p><b>Chair - Dr Prodipto Ghosh</b>, Distinguished Fellow, TERI</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Ms Paramita Datta Dey, Head (Resources and Waste), National institute of Urban Affairs (NIUA)</li> <li>• Prof. Ajay A Deshpande, Adjunct Professor, Ashank Desai Centre for Policy Studies, Indian Institute of Technology, Bombay</li> <li>• Mr Aravind Unni, Urban Poverty Thematic Lead, Indo-Global Social Service Society (IGSSS)</li> <li>• Mr Tarun Jami, Founder &amp; CEO, GreenJams</li> </ul> <p>Q&amp;A Session</p>
1600 – 1630 hrs	<p><b>Networking with Tea/Coffee</b></p>
1630 – 1800 hrs	<p><b>Plenary Session II – Rebuilding Communities: Disaster to Resilience</b> Venue - Silver Oak Hall</p> <p><i>Natural disasters worldwide have resulted in significant loss of life and wealth across the globe. Incidents such as encroachment in coastal zones and change of land use in mountain areas, that have been doing the rounds for decades now, have changed the climatic conditions of these areas to further trigger these disasters. As an outcome, unprepared cities succumb to this self-inflicted scenario. While many of such disasters have shaken countless cities around the globe, there have been a few cities that have come together to build resilient infrastructure through community determination and zeal. This session talks about a few of such communities that have learnt from the past and taken post disaster leap towards resilience and adaptation.</i></p> <p><b>Chair - Professor Santosh Kumar</b>, Senior Advisor, National Institute of Disaster Management, Ministry of Home Affairs, Government of India</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Mr Anup Karanth, Senior Disaster Risk Management Specialist (Social, Urban, Rural &amp; Resilience Global Practice), The World Bank</li> <li>• Dr Anil Prakash Joshi, Founder, Himalayan Environmental Studies and Conservation Organization (HESCO)</li> <li>• Mr Manish Mohandas, Programme Officer, United Nations Development Programme (UNDP)</li> <li>• Dr Umamaheshwaran Rajasekar, Urban Resilience Adviser, Coalition for Disaster Resilient Infrastructure (CDRI)</li> </ul> <p>Q&amp;A Session</p>
End of Day 1	

Day 2 24 <sup>th</sup> November, 2023 Venue – India Habitat Centre, New Delhi	
1000 – 1130 hrs	<p><b>Plenary session III – Influencing through Influencers</b> Venue - Silver Oak Hall</p> <p><i>Hon'ble Prime Minister's vision of Mission LIFE is a public movement to mobilize individuals to become 'Pro-Planet People'. In the field of implementing Sustainability, a major challenge has always been to educate people, make them aware about the impact our actions have on society and to adopt better alternatives. The past decade saw the rise of the clan of Influencers. Digitalization and the far &amp; wide outreach it has on society across all strata is both appealing and appalling. The source of news and information today has a new media in the form of individual opinions circulating as texts, still and dynamic graphics, videos, etc. When misinformation reaches the uninformed, it warrants unthoughtful behaviour of inhuman action. Digital media has influenced and integrated itself everywhere; and has the power to steer the drive towards success or failure of almost about anything. They say there is no such thing as bad publicity. It is also said that without publicity there can be no public spirit, and without public spirit every nation would decay. Using the power of the outreach of various media, this session intends to bring together popular voices who are ardently promoting and raising awareness of environmental issues, shattering misconceptions and breaking stereotypes.</i></p> <p><b>Chair - Ms Urmi A Goswami</b>, Assistant Editor, <i>The Economic Times</i></p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Mr Khurafati Nitin, Radio Jockey (RJ), BIG FM 92.7</li> <li>• Mr Anuj Ramatri, Founder, EcoFreak &amp; Sustainability Influencer</li> <li>• Ms Varsha Raikwar, RJ at Radio Bundelkhand, Development Alternatives</li> <li>• Mr Aalekh Kapoor, Actor and Influencer</li> <li>• Mr Ayushman Pandita, Digital Creator &amp; Founder, Growth Rocket</li> <li>• Ms Navya Singh, Climate Action Journalist</li> </ul> <p>Q&amp;A Session</p>
1130 – 1200 hrs	<p><b>Networking with Tea/Coffee</b></p>
<b>Parallel Tracks</b>	
1200 – 1330 hrs	<p><b>Thematic Track 4 – Role of Local Economies</b> Venue - Silver Oak Hall</p> <p><i>Local economies are pivotal in shaping the progress and prosperity of communities, yet they encounter obstacles such as globalization, constrained resource accessibility, technological deficiencies, and shifting consumer preferences, all of which significantly affect their functioning. This session is dedicated to examining and engaging in dialogue about the paramount importance of local economies in fostering sustainable development. The primary focus is to underscore the potential of local economic systems in promoting environmental, social, and economic sustainability. Furthermore, the session aims to identify effective strategies for harnessing local resources and capabilities to advance sustainable development goals.</i></p> <p><b>Setting the context – Ms Shaily Mahera</b>, Manager, GRIHA Council</p> <p><b>Chair - Mr Rahul Bhawe</b>, Executive Director, National Housing Bank</p>

	<p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Mr Gautam Dey, Former Executive Director, Country Head - Asset Management, Office fitout, Engineering &amp; Customer Services, DLF Limited</li> <li>• Prof. Vivek Kumar, IIT Delhi, National Co-coordinator, Unnat Bharat Abhiyan</li> <li>• Ar. Vardan Soi, Building Science Solutions Team, Saint-Gobain India Private Limited</li> <li>• Mr Karan Mangotra, Partnership and Strategy Specialist, International Solar Alliance</li> <li>• CS Mr Deepak Jain - Chairman, ESG Committee, Delhi Management Association</li> </ul> <p>Q&amp;A Session</p>
1200 - 1330 hrs	<p><b>Thematic Track 5 – Targeting the 2070 Workforce</b> Venue - Magnolia Hall</p> <p><i>Academia, encompassing universities, research institutions, and educational bodies, holds immense importance in knowledge creation, innovation, and the education of future leaders. The session will shed light on the multifaceted contributions of academia in tackling sustainability issues and establishing communities that are resilient and inclusive. The purpose of this session is to delve into the vital role that academia plays in promoting and nurturing sustainable communities. The session will feature expert speakers and interactive discussions to identify strategies to amplify the influence of academic research, education, and engagement in the pursuit of sustainable community development.</i></p> <p><b>Setting the context – Mr Anupam Buttan</b>, Senior Manager, GRIHA Council <b>Chair - Ar. Gita Balakrishnan</b>, Founder and Curator, Ethos Foundation and ACEDGE</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Dr Praveen Saxena, Chief Executive Officer, Skill Council for Green Jobs</li> <li>• Prof. Ar. Abhay Vinayak Purohit, President, Council of Architecture (COA)</li> <li>• Dr Sanghamitra Basu, Member Advisory Committee, Architectural Heritage Division, INTACH, New Delhi &amp; Retired Associate Professor, Department of Architecture &amp; Regional Planning, Indian Institute of Technology Kharagpur</li> <li>• Ar. Rahul Shrikhande, Principal Architect, ARCS design Studio &amp; Visiting Faculty, Bharti Vidyapeeth College of Architecture</li> </ul> <p>Q&amp;A session</p>
1200 - 1330 hrs	<p><b>Thematic Track 6 – Inclusivity in Diversity</b> Venue - Jacaranda Hall</p> <p><i>The pursuit of inclusiveness involves recognizing and appreciating diverse perspectives and experiences in various domains such as urban planning, policymaking, and the physical environment. Inclusive design practices aim to create accessible solutions that benefit everyone. This session focuses on inclusive development of people belonging to all gender and marginalized communities. By fostering comprehension, collaboration, and innovation, it aims to contribute to an empowered and accepting society. Addressing challenges and exploring effective strategies, the session aims to establish equal opportunities, social justice, and sustainable progress for all. It seeks to understand the unique challenges faced by these groups and promote their inclusion and empowerment through policies and initiatives.</i></p> <p><b>Chair - Mr Sanjay Seth</b>, Vice President and Chief Executive Officer, GRIHA Council and Senior Director, The Energy and Resources Institute (TERI)</p>

	<p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Dr Renu Khosla, Director, Centre for Urban and Regional Excellence (CURE) India</li> <li>• Ms Adishree Panda, National Project Coordinator, UN-Habitat India (United Nations Human Settlements Programme)</li> <li>• Ms Akhila Sivadas, Executive Director of the Centre for Advocacy Research (CFAR)</li> <li>• Ms Steffi Elsy Xavier, Artist (Visual / Performing)</li> </ul> <p>Q&amp;A session</p>
1330 – 1430 hrs	<b>Networking Lunch</b>
<b>Parallel Tracks</b>	
1430 – 1600 hrs	<p><b>Thematic Track 7 – Clean Energy, Green Communities</b> Venue – Silver Oak Hall</p> <p><i>As the global community confronts ever-increasing environmental challenges, the imperative for sustainable energy solutions has reached a critical juncture. In this session, we will delve into the exciting realm of clean energy and its crucial role in creating green communities. This session aims to explore the latest advancements, technologies, and policies driving the transition to clean energy sources, such as solar, wind, hydrogen, and geothermal. The session will emphasize the importance of creating green communities, where sustainable practices, energy-efficient infrastructure, and eco-friendly lifestyles are promoted.</i></p> <p><i>The role of government policies, private sector engagement, and community involvement in building resilient and environmentally conscious neighbourhoods will also be highlighted.</i></p> <p><b>Setting the context -</b> Mr Akash Deep, Area Convenor and Senior Programme Manager, GRIHA Council Launch of the “<b>Optimal AC Calculation</b>” (for Home and Small Office) tool by International Copper Association India</p> <p><b>Chair - Mr R R Rashmi</b>, Distinguished Fellow, Earth Science and Climate Change Division, The Energy and Resources Institute (TERI)</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Mr Saurabh Diddi, Director, Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India</li> <li>• Mr Jeevan Kumar Jethani, Scientist-F, Ministry of New &amp; Renewable Energy (MNRE), Government of India</li> <li>• Mr Nihar Shah, Presidential Director, Global Cooling Efficiency Program, Lawrence Berkeley National Laboratory</li> <li>• Mr Mayur Karmarkar, Managing Director, International Copper Association India</li> </ul> <p>Q&amp;A Session</p>
1430 – 1600 hrs	<p><b>Thematic Track 8 – Changing Consciousness and Building Markets</b> Hall - Magnolia</p> <p><i>In response to growing concerns about the industry's significant carbon footprint and thereby its contribution to climate change, a notable shift towards 'sustainability' of building materials and energy sources has emerged in the past few decades. This transition towards sustainability within the industry is propelled by an interplay of research and development, shifting consumer demand towards eco-friendly solutions and a growing supply chain of innovative materials and technologies. But despite this transition, the shift is not yet complete, largely due to various challenges. Balancing sustainability with affordability remains a delicate task as the industry adapts to new demands for greener solutions. In this session, we will discuss the change in the industry with respect to sustainability and how the availability and demand for these new materials is affecting the building market.</i></p>

1430 – 1600 hrs	<p><b>Setting the Context</b> – Mr Ankit Bhalla, Manager, GRIHA Council                  Launch of the report “<b>Technical study on energy &amp; cost savings potential in modern construction buildings using USG Knauf Gypsum board Drywalls</b>”</p> <p><b>Chair - Dr Shailesh Kr Agrawal</b>, Executive Director, Building Materials &amp; Technology Promotion Council (BMTPC), Ministry of Housing &amp; Urban Affairs, Government of India</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Prof. Gunneswara Rao T D, Professor, Department of Civil Engineering, National Institute of Technology, Warangal, Telangana</li> <li>• Ar. Chitra Vishwanath, Principal Architect and Managing Director, Biome Environmental Solutions Private Limited</li> <li>• Ar. Sonali Rastogi, Co-Founding Partner, Morphogenesis</li> <li>• Mr Sumit Bidani, CEO, Knauf India</li> <li>• Mr Tanmay Tathagat, Director, Environmental Design Solutions (EDS)</li> </ul> <p>Q&amp;A Session</p>
1430 – 1600 hrs	<p><b>Thematic Track 9 – Decoding Sustainable Fashion</b>                  Venue – Jacaranda Hall</p> <p><i>Sustainable fashion is a cutting-edge paradigm within the fashion industry, one that holistically considers the entire lifecycle of clothing—from its inception in design and production to its ultimate consumption and disposal—with a paramount focus on mitigating environmental and social repercussions. The session will discuss circular fashion models, upcycling and recycling practices, ethical sourcing, and the influence of consumer behaviour on sustainable fashion’s growth. We will also delve into the positive influence sustainable fashion can have on local communities, empowering artisans and promoting fair labour practices. In line with the conference theme of empowering sustainable and resilient communities, this session will delve into the transformative power of sustainable fashion practices on both the local and global scales.</i></p> <p><b>Chair - Ms Shabnam Bassi</b>, Deputy CEO-cum-Secretary &amp; Treasurer, GRIHA Council &amp; Director, The Energy and Resources Institute (TERI)</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Prof. Bhaskar Mitra, Director - School of Design, Presidency University Bangalore</li> <li>• Ms Steffi Elsy Xavier, Artist (Visual/Performing)</li> <li>• Mr Kaushlendra Narayan, Director Garmenting Operations &amp; Outsourcing, Raymond Ltd. (Garmenting Division)</li> </ul> <p>Q&amp;A Session</p>
1430 – 1600 hrs	<p><b>GRIHA NASA India Event – Celebrating 10 years of GRIHA Trophy at NASA India</b>                  Venue – Silver Oak Patio</p> <ul style="list-style-type: none"> <li>• <b>Welcome Address – Mr Sanjay Seth</b>, Vice President and Chief Executive Officer, GRIHA Council and Senior Director, TERI</li> <li>• <b>Special Address – Mr Rahul Dadheech</b>, General Manager – Facility Management at 32<sup>nd</sup></li> <li>• <b>Special Address – Mr Vardan Soi</b>, Building Science Solutions Team, Saint Gobain India Pvt. Ltd. – R&amp;D</li> <li>• <b>Keynote Address – Ar. Gita Balakrishnan</b>, Founder and Curator, Ethos Foundation and ACEDGE</li> <li>• <b>Open House Discussion by NASA India</b></li> <li>• <b>Remarks – Mr Hari Sasikumar</b>, President, NASA Council</li> <li>• <b>Vote of Thanks – Mr Anupam Buttan</b>, Manager, GRIHA Council</li> </ul>
1600 – 1630 hrs	<p><b>Networking with Tea/Coffee</b></p>

1630 – 1800 hrs	<p><b>Plenary Session IV – Preparedness for Climate Change: Where India Stands</b> Venue - Silver Oak Hall</p> <p><i>Countries have made conversation-stirring, buzz-creating commitments at global platforms to limit their impact on the environment. India’s commitment at COP26 to tread on the path to decarbonization by 2070 via Panchamrit – a five step set of goals has set off many conversations and actions.</i></p> <p><i>Climate preparedness will have to address all pillars of Sustainability – environmental, social, economic and the extended and crucial pillar of governance. Policies, infrastructure, collaborative working and behavioural patterns have to be in tandem to prepare for and recover from climate impacts. There are multiple frameworks and processes that address and assess climate change mitigation activities carried out by various organizations across sectors. However, it is imperative to gauge the real-scale impact that any mitigation strategy carves, which makes it important to recapitulate the journey made so far, identify the issues, challenges and failures; and prepare the roadmap to decarbonize India. One side of the coin encompasses the collective impact on the environment; the other is the impact on people due to climate change that also includes deadly health hazards.</i></p> <p><i>This session intends to bring together industry experts from multi-sector to deliberate and review India’s stance on climate preparedness and the necessary escalatory interventions that need to be adopted to build resilient communities.</i></p> <p><b>Chair - Ms Manisha Natarajan</b>, Consulting Editor, Urban Development &amp; Real Estate, NDTV</p> <p><b>Speakers -</b></p> <ul style="list-style-type: none"> <li>• Prof. (Dr) K Srinath Reddy, Honorary Distinguished Professor and Goodwill Ambassador, Public Health Foundation of India (PHFI)</li> <li>• Smt. Sonali Ghosh, Field Director, Kaziranga National Park TR &amp; CEO, Assam Agroforestry Development Board</li> <li>• Mr Greg H Kats, Founder and CEO, Smart Surfaces Coalition</li> <li>• Mr Joshua Wycliffe, Chief of Operations, International Solar Alliance (ISA)</li> <li>• Ms Zerine Osho, Director - India Program, Institute for Governance &amp; Sustainable Development (IGSD)</li> </ul> <p>Q&amp;A Session</p>
1800 – 1930 hrs	<p><b>Valedictory Session &amp; Award Evening</b> Venue - Stein Auditorium</p> <ul style="list-style-type: none"> <li>• <b>Welcome Address</b> - Dr Vibha Dhawan, President, GRIHA Council and Director General, TERI</li> <li>• <b>Special Address</b> - H. E. Mr Freddy Svane, Ambassador, Royal Danish Embassy, New Delhi, India</li> <li>• <b>Special Address</b> - Dr Ajay Mathur, Director General, International Solar Alliance (ISA)</li> <li>• <b>Release of ‘GRIHA’s Impactful 50 - Beyond Green Building Blocks’ book</b></li> <li>• <b>Valedictory Address</b> - Smt. Leena Nandan, Secretary, Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India</li> <li>• <b>Felicitation Ceremony:</b> <ul style="list-style-type: none"> <li>» Award of GRIHA Ratings</li> <li>» GRIHA Exemplary Awards</li> </ul> </li> <li>• <b>Vote of Thanks</b> – Mr Sanjay Seth, Vice President and Chief Executive Officer, GRIHA Council and Senior Director, TERI</li> </ul>
1930 – 2000 hrs	<p><b>Cultural Evening</b></p>
2000 hrs onwards	<p><b>Dinner Reception</b></p>

# Prelude to 15<sup>th</sup> GRIHA Summit



## Prelude I - Technical Workshop on 'Re-defining Thermal Comfort – The Way Forward'

New Delhi, October 27, 2023

As a prelude to the 15<sup>th</sup> GRIHA Summit, a technical workshop was conducted on the topic "Re-defining Thermal Comfort- The Way Forward" on October 27, 2023. The intent of this comprehensive workshop was to educate diverse building industry professionals on indoor thermal comfort requirements. The workshop offered a blend of historical insights and contemporary cases related to naturally ventilated buildings' thermal comfort. The session dealt with principles of thermal comfort, Adaptive Thermal Comfort (ATC) standards and its application. Thereafter, hands on experience was provided using tools like the India Model for Adaptive Comfort (IMAC) and CBE Thermal Comfort Tool inclusive of Predictive Mean Vote (PMV) tool, Psych tool, Weather tool and Climate consultant.

Mr Akash Deep, Senior Programme Manager, *GRIHA Council* delivered the welcome address for the Session. Industry expert, Ar. Gaurav Shorey, Director, *PSI Energy Pvt. Ltd.*, ECBC Master Trainer and Visiting Faculty, SPA, New Delhi, presented his enriching experiences during the session. Mr Anupam Buttan, Senior Manager, *GRIHA Council*, focused on the alignment and requisites of the GRIHA rating variants for thermal comfort and concluded the session with his closing remarks.

## Prelude II - Paryavaran Rakshak Programme 2.0



Taking a step forward for engaging students and teachers in sustainability, GRIHA Council organized a 'Sustainability Fair' under Paryavaran Rakshak Programme 2.0 on November 3, 2023 at the India Habitat Centre, New Delhi. Based on the theme "*Earth ko Anarth se Bachaye*" an initiative to engage multiple stakeholders and inculcate the values of sustainability in them, a series of events were conducted under the Sustainability Fair which included a sustainable lifestyle workshop, Mascot Design Competition, Poem Competition, School Exhibition, and Nukkad Natak competition.

More than 400 students from various schools across the nation participated in the event. Events were planned for students to engage them and help them showcase their understanding on the concept of sustainability in their unique and innovative ways. Along with this, interactive games were played with students to impart education on energy efficiency, water & waste management, and environmental sustainability.

The winners under various competitions were:

### **Mascot Design Competition-**

- First Prize: Dayawati Modi Academy, Meerut, Uttar Pradesh

### **Poem Competition-**

- First Prize: JNV Sheopur, Madhya Pradesh
- Runner Up: St. Thomas Girls Sr Sec School, Mandir Marg, New Delhi

### **School Exhibition-**

- First Prize: St. Thomas Girls Sr Sec School, Mandir Marg, New Delhi



#### Nukkad Natak Competition-

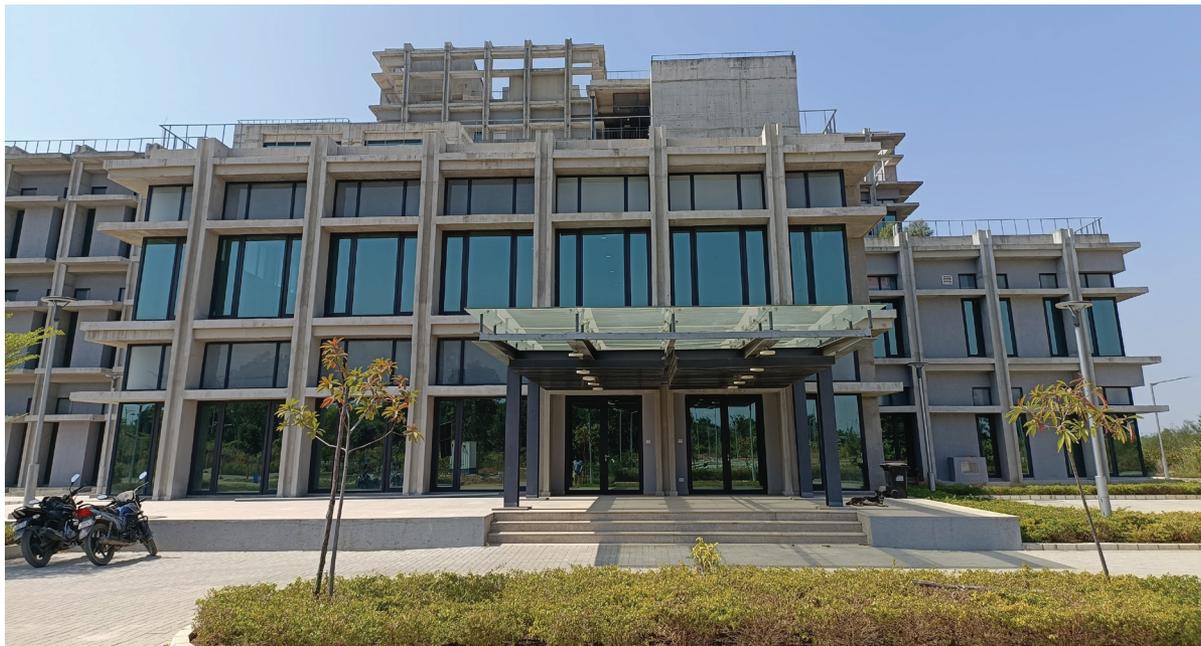
- First Prize: Dayawati Modi Academy, Meerut, Uttar Pradesh (Under Junior Category)
- First Prize: Dayawati Modi Academy, Meerut, Uttar Pradesh (Under Senior Category)
- Runner Up: DPS Ranipur, Haridwar, Uttarakhand (Under Senior Category)

The participants and winners were felicitated with prizes and certificates sponsored by the event partners—Decathlon ESI store, Decathlon Play, India Global Social Service Society, ASAI, and TERI.

## Prelude III - Green Tours

GRIHA Council launched Green Tour series in the month of November. Under the tour series, GRIHA Council successfully conducted the tours of Indian Institute of Technology (IIT) Hyderabad Campus, Bangalore International Centre, Bengaluru and Bestech House, Gurugram. The objective of the green tour were 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.



**IIT Hyderabad Campus**

Date of tour: November 18, 2023



**Bestech House, Gurugram**

Date of tour: November 21, 2023



**Bangalore International Centre, Bengaluru**

Date of tour: December 16, 2023



She underscored the crucial need to foster and advocate for environmentally conscious practices at the individual, organizational, and community levels in order to envision a worldwide shift towards sustainability through highlighting the globally redefined concept of development across diverse sectors. The theme of this year's Summit— "Empowering Sustainable and Resilient Communities" is taking the discussion in that direction. Recognizing the global spirit for sustainable development and India's transition to sustainability, she stated that the Summit seeks to encourage collaboration among stakeholders at multiple levels. Summit aims to identify local solutions for global challenges for the benefit of all through advancing the comprehensive international and national partnerships for strategic engagements. She emphasized the power of people and insisted that if one billion people, out of the global population of eight billion, adopt environmentally friendly behavior, it could lead to a decrease of approximately 20 percent in global carbon emissions, as stated by the United Nations Environment Programme (UNEP). She encouraged delegates to engage actively in the GRIHA Summit, the flagship event of the GRIHA Council.



**Mr Sanjay Seth**, Vice President and Chief Executive Officer, *GRIHA Council* and Senior Director, *The Energy and Resources Institute (TERI)* stated that the pivotal role of communities forms the bedrock of climate action. He asserted that communities possess the inherent capability to drive sustainable and resilient development. Mr Seth informed the gathering that GRIHA Council has joined Alliance for Water Stewardship (AWS) and Climate Technology Centre Network (CTCN) and these associations shall help in addressing challenges associated with climate change. Furthermore, he elucidated on the prelude events organized by GRIHA Council, "Technical workshop titled Re-defining Thermal Comfort - The Way Forward," Sustainability Fair conducted under Paryavaran Rakshak Programme 2.0, and the Green Building Tour Series, aimed at sensitizing school students, architects, designers, and HVAC engineers etc. on aspects relating to sustainability and green building practices.

**Ms Dipa Singh Bagai**, Director, *NRDC India Private Limited*, emphasized on the criticality of energy efficiency, cooling, and resilience in our approaches to development. Emphasizing the urgency, she highlighted the necessity for credible, environmentally friendly solutions that not only align with affordability but also integrate requisite technologies. She stressed on the role of individuals, urging them to become catalysts for change and advocates of sustainable living.



A Memorandum of Understanding was signed between GRIHA Council and NRDC India by Mr Sanjay Seth, VP & CEO, GRIHA Council & Ms Dipa Bagai, Director, NRDC India Private Limited.



**Mr Greg H Kats**, Founder and CEO, *Smart Surfaces Coalition*, emphasized on the rich history of India and the strong roots of sustainability here. He expressed admiration for the slogan 'One Earth, One Family, One Future,' that encapsulates a powerful ethos of unity and collective responsibility. He further expressed contentment about partnering with organizations such as GRIHA Council and TERI, stressing their commitment to ensuring a sustainable future. Collaborative efforts, according to Mr Greg, can significantly contribute to the evolution of environmentally conscious practices in the building sector.



A Memorandum of Understanding was signed between GRIHA Council and Smart Surfaces Coalition (SSC) by Mr Sanjay Seth, VP & CEO, GRIHA Council & Mr Greg H Kats, Founder and CEO, Smart Surfaces Coalition.



**Ms Sunaina Singh**, Former Vice Chancellor, *Nalanda University*, highlighted the university's support for 200 villagers through sustainability measures and emphasized GRIHA Council's integral role in the institution's sustainability journey. She insisted on the symbiotic relationship between efforts to achieve net-zero emissions and the creation of smart societies and countries. She extended the concept of smart cities to an entire country's infrastructure and governance, advocating for the integration of technology and data to enhance the quality of life.



The launch of the 'GRIHA for Existing Schools Manual Version 3' during 15th GRIHA Summit in the presence of the eminent dignitaries. Ms Shabnam Bassi, Mr Greg H Kats, Ms Sunaina Singh, Mr Sanjay Seth, Dr Vibha Dhawan, Ms Dipa Singh Bagai and Mr Sameer Pandey (from L to R)



**Mr Sameer Pandey**, IRS, Joint Commissioner [Admin], *Navodaya Vidyalaya Samiti, Ministry of Education, Government of India*, talked about the operational model of Navodaya Vidyalaya Samiti (NVS), overseeing 650 fully residential schools across India, reserving 75% of their seats for rural students. He highlighted the provision of free food and lodging for all students to eliminate economic barriers to quality education. Mr Pandey also emphasized the incorporation of 312 Jawahar Navodaya Vidyalaya (JNV) schools into the Prime Minister's initiative as green schools, focusing on environmental friendliness and technological efficiency. These schools set an example for sustainability in educational infrastructure, he added.



A Memorandum of Understanding was signed between GRIHA Council and Navodaya Vidyalaya Samiti (NVS) by Mr Sanjay Seth, VP & CEO, GRIHA Council & Mr Sameer Pandey, IRS, Joint Commissioner [Admin], Navodaya Vidyalaya Samiti, Ministry of Education, Government of India.

**Ms Shabnam Bassi**, Deputy CEO & Secretary-cum-Treasurer, *GRIHA Council* and Director, *The Energy and Resources Institute (TERI)* delivered the vote of thanks, expressing gratitude for the presence of all invited guests and participants.



# GRIHA Exhibition 'Vikalp'



During the 15<sup>th</sup> GRIHA Summit, GRIHA Council organized an innovative exhibition at the India Habitat Centre in New Delhi. The exhibition aimed to create a dynamic platform for industry leaders and users to showcase a range of state-of-the-art, environmentally sustainable products and technologies. Its goal was to foster multi-stakeholder partnerships and facilitate networking across diverse sectors, including government bodies, academia, civil society organizations, and professionals in various disciplines such as architecture, engineering, and construction management.

The theme for this year's exhibition was "Vikalp", featuring two exhibits:

1. **A Mud and Bamboo Structure** showcasing traditional Indian architecture using local materials. This exhibit offered insight into how ancestral knowledge of local materials and technologies can create resilient and comfortable spaces using mud, lime, and bamboo.
2. **A Modern Steel Structure** showcasing advancements in technology built with a prefabricated light-gauge steel frame using drywall construction technologies. This construction method ensures error-free design execution, a fast-track process, and waterless construction.

The Vikalp exhibit aimed at empowering users to make informed decisions when selecting various materials and technologies for constructing green buildings.



# Inaugural Session



The Inaugural Session of the **15<sup>th</sup> GRIHA Summit** commenced on November 23, 2023, at the India Habitat Centre, New Delhi, marking the initiation of a two-day event hosted by GRIHA Council. Distinguished dignitaries, Shri Pramod Kumar Tiwari, Director General, Bureau of Indian Standards (BIS), Ministry of Consumer Affairs, Food & Public Distribution, Government of India, and Prof. Ar. Abhay Vinayak Purohit, President, Council of Architecture (COA), graced the occasion with their esteemed presence.



The event commenced with the ribbon-cutting ceremony of the **GRIHA Exhibition – Vikalp**, led by the eminent dignitaries. The ceremonial lamp was then lit, signifying the enlightening of knowledge and progress in the field of sustainable architecture. **Dr Vibha Dhawan**, in her welcome remarks, expressed gratitude to the dignitaries for their presence and emphasized the deeply ingrained connection of sustainability and circular economy in the Indian ethos.



Dr Dhawan urged a shift from 'Save the Planet' to 'Save the Planet for our Survival' and emphasized GRIHA Council's role in ensuring green and culturally aligned development of the infrastructure that is yet to be built. She concluded by thanking the dignitaries, partners, and the audience for their unwavering support.

In his special address, **Prof. Ar. Abhay Vinayak Purohit** emphasized a holistic, 360-degree approach towards sustainability. He highlighted the historical significance of India's architectural marvels and underlined the importance of design decisions in conjunction with advancements in materials and technology.



**Shri Pramod Kumar Tiwari**, in his keynote address, emphasized the necessity of creating awareness about sustainability. He brought attention to the vast number of standards formulated by BIS, emphasizing the need to utilize them effectively. Shri Tiwari informed the audience about BIS's plans to provide training and capacity building, even at the school level, through the initiation of Standard Clubs. He highlighted the BIS mobile application, providing access to safety standards crucial for day-to-day life, and praised GRIHA for integrating national building codes & standards within its ratings.

The Inaugural Session witnessed the launch of the new **GRIHA rating–GRIHA Rating for Interior Spaces Version 1.0 (GRIHA InS)** in the presence of the eminent dignitaries. The programme concluded with the presentation of awards to GRIHA certified buildings nationwide. Mr Sanjay Seth delivered the vote of thanks, expressing gratitude for the presence of all invited guests and participants, acknowledging their invaluable contribution to the success of the event.



# Plenary Session 1

## Earth's Critical Zones: Restoring Harmony

The session, titled “**Earth’s Critical Zones: Restoring Harmony**,” convened distinguished experts to deliberate on the state of critical global regions, climate-induced natural disasters, and the prospective developmental agenda tailored to critical regions and beyond.



The session commenced with an insightful presentation by **Dr Anil Kumar Bhardwaj**, Scientist - F, *Wildlife Institute of India*, who elucidated a case study on community-based adaptive programmes implemented in the Periyar Tiger Reserve. Dr Bhardwaj illustrated about the creation of eco-development committees (EDCs) and community-based eco-tourism initiatives. He emphasized about the integral role played by Kerala’s local communities in navigating difficult pandemic circumstances through effective communication, networking, and mobilization of physical and financial resources. “Resilience does not come alone from the outcomes of the programmes, but it is the processes which are very important, including the process of long-term engagements, empowerment, and adaptation,” he added.



Subsequently, **Mr Ashish Chaturvedi**, Head - Action for Climate and Environment, *UNDP India*, addressed the intersecting crises of nature, climate change, and pollution, exacerbated by the pandemic and unmitigated conflicts. Stressing the imperative need for “participatory approaches in restoring harmony,” Mr Chaturvedi asserted the importance of a “science-based and well-informed approach systematically addressing risks.” He emphasized that the integration of social safeguards and the active involvement of local communities are as pivotal as aligning interests with conservation processes. Mr Chaturvedi highlighted the necessity of building capacities and fostering cooperation with governmental bodies, research institutions, and bilateral and multilateral organizations for comprehensive and sustainable efforts, including risk assessments.

**Ms Raina Singh**, Deputy Regional Director, South and West Asia, *C40 Cities*, emphasized the critical role of data mapping in the management and conservation of urban assets. She advocated for strengthening the capacities of urban local bodies and highlighted the vital role of both horizontal and vertical integration in conservation processes. Proposing the “use of AI-based tools for mapping green areas, urban heat islands, and hotspots,” Ms Singh drew attention to the ambiguities surrounding the understanding of “nature-based solutions” and advocated for exploring financial avenues for such solutions.



Delving into the significance of restoring harmony, **Mr Hitesh Vaidya**, Former Director, *National Institute of Urban Affairs (NIUA)*, underscored that 65% of Indian cities present ample opportunities for decarbonization efforts. He commended the resilience demonstrated by Indians over time and emphasized the crucial aspects of “Convergence, Communication, and Collaboration.” Mr Vaidya highlighted the imperative to translate intentions into action, emphasized the need for handholding, skillset development, and behavioural change. He concluded by stressing the “necessity to strengthen governmental institutional frameworks for building resilience.”



**Ms Neha Sinha**, Head, Policy and Communications, *WWF-India*, centred her presentation on the Global Biodiversity Framework and its overarching vision of harmony with nature. She highlighted the importance of terms such as restoration and rewilding in global discourse and stressed the “urgent need for decarbonizing infrastructure.” Ms Sinha highlighted India’s commitments under the UN Convention to combat desertification and the Convention on Biological Diversity. Drawing attention to the collaboration between WWF and NHA for developing elephant corridors, she underscored that the productivity of an ecosystem as a carbon sink is enhanced when diversity is maintained. Ms Sinha urged for the integration of global and national targets, fostering consensus, striking a balance between development goals and nature conservation.

## Key Takeaways

The session highlighted key strategies for sustainable development. Dr Anil Kumar Bhardwaj showcased successful community-based programmes in the Periyar Tiger Reserve, emphasizing resilience through long-term engagement and adaptation. Mr Ashish Chaturvedi advocated for participatory approaches, science-based risk assessments, and collaboration with various stakeholders. Ms Raina Singh stressed the role of data mapping and AI-based tools in urban asset management. Ms Neha Sinha focused on the Global Biodiversity Framework, urging decarbonization efforts and ecosystem diversity. Mr Hitesh Vaidya emphasized the need for convergence, communication, and collaboration in building resilience for decarbonization in Indian cities.



# Plenary Session 2

Communities Rebuilding: Disaster to Resilience



The session on “**Communities Rebuilding: Disaster to Resilience**” commenced with remarks from **Prof. Santosh Kumar**, Senior Advisor, *National Institute of Disaster Management, Ministry of Home Affairs, Government of India*, who highlighted the imperative to rebuild communities and foster resilience in the face of disasters, particularly earthquakes, landslides, and floods. Prof. Kumar addressed the damage inflicted on the environment, life, and property by natural disasters, emphasizing the involvement of empowered communities and the role of various agencies government, non-government, private organization in facilitate community empowerment. He advocated for the establishment of a network comprising financial institutions, knowledge-sharing entities, research institutions, and technological advancements, with a special emphasis on the pivotal role of youth in achieving the goal of community rebuilding and disaster resilience.



**Mr Anup Karanth**, Senior Disaster Risk Management Specialist (Social, Urban, Rural & Resilience Global Practice), *The World Bank*, delved into the significance of risk profiling and infrastructure resilience in the context of environmental disasters. He emphasized the integration of risk profiling into design processes to create safe habitats. According to Mr Karanth, authentic data plays a crucial role in risk assessments and the planning of resilient infrastructure for the future. He urged for the reformulation of existing building codes and norms, considering the current scenario, including energy and fire retrofitting.

**Dr Anil Prakash Joshi**, Founder, *Himalayan Environmental Studies and Conservation Organization (HESCO)*, directed attention to the usage of terms such as 'Green' and 'Sustainable' in our daily activities, calling for a revisit of their significance. Engaging in the rural-urban debate, he emphasized the need for urban dwellers to voice their concerns about ongoing imbalances and disasters. Dr Joshi proposed education and training on risk management and rapid response techniques at the grassroots level, particularly in primary schools and among teachers, as a crucial step towards mitigation.



**Mr Manish Mohandas**, Programme Officer, *United Nations Development Programme (UNDP)*, addressed issues related to urban sprawl and its aftermath. He elaborated on the concept of vertical cities, emphasizing its relevance in the Indian context. Mr Mohandas questioned the hindrances to vertical growth in a country where over 50% of the population is yet to be urbanized. He advocated for the inclusion of nature-based solutions and the incorporation of concepts such as interconnectivity and green infrastructure in the urban planning process.

**Dr Umamaheshwaran Rajasekar**, Urban Resilience Adviser, *Coalition for Disaster Resilient Infrastructure (CDRI)*, commenced his address by highlighting the challenges posed by climate change and its impact on urban areas worldwide. Stressing the importance of governance in disaster risk management, he advocated for the establishment of urban disaster management cells in urban areas. Dr Rajasekar emphasized the urgent need for amending master plans to reflect the current scenario and endorsed a holistic approach to address these challenges effectively. He concluded by underlining the difficulty of building or new infrastructure investing in without considering the historical or current scenario of hazards.



## Key Takeaways

The session emphasized the pivotal role of empowered communities in facing natural disasters. Prof. Santosh Kumar highlighted the need for collaboration among various agencies and emphasized involvement of youth. Mr Anup Karanth stressed risk profiling integration into design processes for resilient infrastructure. Dr Anil Prakash Joshi urged revisiting the significance of terms such as 'Green' and 'Sustainable' in daily activities, emphasizing education on risk management. Mr Manish Mohandas advocated for vertical cities and nature-based solutions in urban planning, while Dr Umamaheshwaran Rajasekar emphasized role of governance in disaster risk management and the necessity to amend master plans to address current challenges.



# Plenary Session 3

## Influencing through Influencers



The Plenary Session III, titled "Influencing through Influencers," convened a diverse group of influencers who explored the intersection of sustainability within their respective domains. Key themes encompassed the challenges of making sustainability relatable, instigating behavioural change, and cultivating inclusive dialogues for holistic solutions. The Session aimed to bring together influential voices advocating and raising awareness about environmental issues, dispelling misconceptions, and challenging stereotypes.



Chaired by **Ms Urmi A Goswami**, Assistant Editor, *The Economic Times*, the session emphasized the imperative for a nationwide shift in sustainability efforts, transcending the confines of individual villages. Ms Goswami highlighted the need to redefine unexplored aspects of sustainability, indicating the pivotal role influencers play in raising awareness and influencing behavioural change on a mass scale.



**Ms Varsha Raikwar**, Radio Jockey (RJ), Radio Bundelkhand, *Development Alternatives*, provided insights into the impact of unsustainable development on communities in Bundelkhand, particularly in the realms of water and air pollution. Despite awareness, the local population is facing difficulty finding viable alternatives for their livelihoods. Stressing the importance of awareness and dialogue, Ms Raikwar advocated for empowering communities to integrate sustainability into their daily lives, with a special emphasis on women's participation in shaping the vision of sustainability within villages.

**RJ Nitin**, Radio Jockey (RJ), *BIG FM 92.7*, shared experiences of utilizing radio as a medium for behavioural change. Through the infusion of humour and subtlety, Nitin's team encouraged listeners to adopt sustainable practices, as demonstrated by the successful "Green House Challenge." Mr Nitin also emphasized the role of consistent messaging, employing the technique of "hammering," and stressed the effectiveness of direct action in instigating change. He illustrated this point with his real experience advocating for installation of street lights on a deserted stretch of the Gurgaon Faridabad highway. He recounted his decision to walk alone on the poorly lit road, creating an unsafe environment, and invited others to join. This initiative gathered considerable attention, ultimately leading to the installation of streetlights. In his words, "You bring about change by acting on it rather than merely preaching."



**Mr Aalekh Kapoor**, Actor and Influencer, discussed the influential role of actors in shaping public opinion, advocating for a balance between entertainment and education. Mr Kapoor highlighted the challenge of making sustainability personally relevant in a content-diverse platform, and emphasized the importance of emotional connections in motivating adoption of sustainable practices.

**Mr Anuj Ramatri**, Sustainability Influencer & Founder, *EcoFreak*, introduced the concept of an "Eco Freak" and highlighted the impact of his films, focusing on practical sustainability solutions. To encourage people to embrace eco-friendly practices, he emphasized the need for actionable solutions and positive example, which he also strives to showcase through his films.





**Mr Ayushmann Pandita**, Digital Creator & Founder, *Growth Rocket*, stressed the importance of making environmental issues relatable. He proposed that influencers, especially content creators, have the power to engage audiences by aligning sustainability with personal experiences. Mr Ayushmann highlighted the role of influencers in making sustainability a part of everyday conversations and connecting with the audience emotionally.

**Ms Navya Singh**, Climate Action Journalist, drawing on her experiences as a journalist covering projects such as the Adani port, stressed the need for detailed discussions on the impacts of such developments, beyond polarized debates. She highlighted the role of journalism in fostering informed conversations and creating platforms for constructive dialogues, emphasizing the importance of awareness and clear information transmission.



## Key takeaways

The Session highlighted the imperative for a nationwide shift in sustainability efforts, influencers' pivotal role in raising awareness, and the challenges of making sustainability personally relevant. Insights from various influencers stressed the importance of awareness, dialogue, and building emotional connections to encourage adoption of sustainable practices. The Session stressed on the impact of media, especially radio and films, in promoting behavioural change and emphasized influencers' role in integrating sustainability into everyday conversations for widespread impact.



# Plenary Session 4

Preparedness for Climate Change: Where India Stands



The convened plenary session, titled “Preparedness for Climate Change: Where India Stands,” served as a platform for industry experts across diverse sectors to engage in a comprehensive examination of India’s approach to climate preparedness.



**Ms Manisha Natarajan**, Consulting Editor of Urban Development & Real Estate, *NDTV*, took the helm as the chairperson. Ms Natarajan emphasized India's pivotal role in sustainability and its proactive stance in preparing for unforeseen environmental challenges.



**Prof. (Dr) K Srinath Reddy**, Honorary Distinguished Professor and Goodwill Ambassador, *Public Health Foundation of India (PHFI)*, delivered insights into the significance of COP28 and outlined India's proposed actions at the conference. Dr Reddy stressed the imperative for an efficient, equitable, and reinforced health system, advocating for the establishment of a smart and climate-resilient healthcare infrastructure. He addressed the escalating challenges of water stress and heat stress, particularly their direct impact on staple food production and essential nutrients, necessitating the implementation of climate-smart agriculture. Dr Reddy also emphasized the importance of enhancing supply chain management and reducing emissions within this sector.

**Ms Sonali Ghosh**, Field Director, *Kaziranga National Park TR & CEO, Assam Agroforestry Development Board*, shared insights into the adverse effects of climate change on forests & wildlife. She highlighted the transformation of forests and natural biodiversity due to climate changes over the years. Ms Ghosh emphasized the urgency of addressing zoonotic diseases, advocating for a holistic 'One Health Approach' that considers human health, planetary health, and animal health.



**Ms Zerine Osho**, Director - India Program, *Institute for Governance & Sustainable Development (IGSD)*, commended India's efforts, specifically the India Cooling Action Plan established in 2019. She addressed key points related to food security, cooling action plans, and thermal comfort. Ms Osho highlighted India's endeavours and the global cooling pledge launched at COP28. She emphasized crucial aspects of climate finance and the significance of addressing non-CO<sub>2</sub> gases. Ms Osho advocated for a dual strategy, focusing on CO<sub>2</sub> mitigation in the longer term, anchored in the permanent decarbonization of energy methods.

**Mr Greg H Kats**, Founder and CEO, *Smart Surfaces Coalition*, expressed appreciation for GRIHA Council's contribution in sustainable infrastructure. He elucidated the work of the Smart Surfaces Coalition, drawing attention to the challenges associated with surfaces. He provided an overview of the Smart Surfaces Coalition's initiatives, emphasizing the challenges that the world faces with fragmented ideas in urban governance. Mr Kats highlighted the need for an integrated approach to harness the benefits of technologies, particularly in utilizing all surfaces for maximum impact. He highlighted the substantial benefits of green strategies in the longer run.





**Mr Joshua Wycliffe**, Chief of Operations, *International Solar Alliance (ISA)*, shared experiences and recent initiatives of the International Solar Alliance. He commended the Government of India for leading solar projects, acknowledging India's exemplary financial and subsidy models. Mr Wycliffe emphasized the importance of battery storage and diversified supply chains, advocating for a global approach to prevent dependence on a single economy. He lauded India's commercial model of solarization as one of the best globally, citing the government's incentivization of solar and renewable energy as a role model for nations worldwide.

## Key Takeaways

The session highlighted India's proactive approach in addressing environmental challenges. Chaired by Ms Manisha Natarajan, the session covered insights from Prof. (Dr) K Srinath Reddy on COP28 actions, emphasizing resilient healthcare and climate-smart agriculture. Ms Sonali Ghosh addressed climate impacts on forest & wildlife, advocating a holistic 'One Health Approach.' Ms Zerine Osho praised India's efforts, focusing on the Cooling Action Plan and climate finance. Mr Greg H Kats emphasized integrated urban governance for sustainable infrastructure, while Mr Joshua Wycliffe applauded India's solar initiatives and called for global collaboration in diversifying supply chains.



# Thematic Track 1

## Growth through Sustainable Infrastructure



The session commenced with setting of context by **Mr Satyajeet Rajan**, Chief Executive Officer, *KIIFCON Private Limited*. Mr Rajan provided contextual insight, illustrating the evolutionary journey of the parent organization of KIIFCON from 2016 to 2019, during which it lacked a defined ESG framework. He highlighted a significant accomplishment in 2021, marked by a Memorandum of Understanding (MoU) with the GRIHA Council, resulting in 43 KIIFB-funded buildings obtaining GRIHA certification.



The session was chaired by **Mr Shri Prakash**, a Distinguished Fellow, Transport and Urban Governance Division, *The Energy and Resources Institute (TERI)*. Mr Prakash emphasized the pivotal role of sustainable infrastructure in the broader context of economic and social development. He stressed that such infrastructure should not only be economically viable but should also address equity concerns within the community. Mr Prakash highlighted initiatives like the *Pradhan Mantri Gramin Awas Yojana* as a positive step towards connecting people in remote areas, with the aim of providing enhanced opportunities and markets for local products.

**Mr Ashok B Lal**, Founder and Principal Architect, *Ashok B Lal Architects*, discussed the challenges of urbanization and the need for affordable, environmentally conscious, and sustainable infrastructure, particularly in housing. He shared Singapore's success story, where 85% of the population enjoys government-provided housing. Advocating for efficient construction methods, he called for quick, low-cost, energy-efficient, dense, low-rise development to address the growing demand for sustainable, affordable, and climate-resilient housing.



**Mr Alok Kumar**, General Manager (Technical), *National Highways Authority of India (NHAI)*, Government of India, highlighted the significance of National Highways in facilitating transportation across regions. He emphasized the concept of Green Highways, extending beyond plantation to ensure the survival and sustainability of planted vegetation. Green Highways initiatives include ecological considerations like afforestation, landscaping, soil conservation, and biodiversity enhancement, aiming to beautify landscapes and provide ecological benefits.



**Ms Amita Pathria**, Sanitation Specialist- Policy and Technical Support, *WaterAid India*, emphasized on the importance of addressing the entire infrastructure value chain, from access to containment, treatment, and re-use. She discussed how integrating these elements contributes to sustainable solutions, emphasizing the interconnected nature of infrastructure for a holistic approach to sustainability.

**Mr Gaurav Yadav**, Assistant General Manager (Arch), *Airports Authority of India (AAI)*, addressed the Environmental Policy of the Airports Authority of India (AAI), outlining the vision for airport infrastructure and examining the growth of the aviation industry in India. He delved into AAI's objectives, emphasizing the need to reconfigure infrastructure through meticulous optimization of internal layouts, master plan review, and strategic land use optimization. He stressed on AAI's commitment to enhancing efficiency and functionality in response to the evolving demands of the aviation landscape.



## Key Takeaways

The discussions highlighted diverse perspectives on sustainable infrastructure development in India. Mr Satyajeet Rajan outlined the organizational journey, emphasizing KIIFB's unique role in masala bonds. A significant achievement in 2021 was the Memorandum of Understanding (MoU) with the GRIHA Council, resulting in 43 KIIFB-funded buildings obtaining GRIHA certification. Chaired by Mr Shri Prakash, the session emphasized the vital role of sustainable infrastructure in economic and social development. Mr Ashok B Lal advocated for affordable, environmentally conscious, and climate-resilient housing. Mr Alok Kumar highlighted the importance of Green Highways for sustainable transportation, and Ms Amita Pathria emphasized the holistic nature of sustainable solutions. Mr Gaurav Yadav discussed AAI's commitment to reconfigure airport infrastructure for enhanced efficiency.

# Thematic Track 2

Cultural Identity in the Built Fabric

## Cultural Identity in Built Fabric



The thematic track titled Cultural Identity in Built Fabric, was chaired by **Ar. Gaurav Shorey**, Director, *Psi Energy Pvt. Ltd.* Mr Shorey initiated the session by posing an important question: "Can culture withstand the challenges posed by climate change, including the depletion of lakes? How will subsequent generations preserve their traditions in these adverse conditions?". He advocated for the dissemination of knowledge regarding vernacular-built spaces and the fundamental principles of sustainability to future generations through educational institutions, such as schools and colleges. By integrating vernacular architecture and sustainability into the educational curriculum, institutions contribute to moulding a generation that esteems, values, and applies these principles, thus contributing to a more sustainable and culturally enriched built environment.



**Dr Shikha Jain**, Director - Preservation and Community Design, Development and Research Organisation for Nature, Arts and Heritage (DRONAH), emphasized the profound connection between culture and people's memories, asserting its integral role in the historical context of the built fabric. Beyond the physical structures, she highlighted the importance of nature and people in shaping culture. Dr. Jain cited examples such as Jaipur and Jodhpur, where unique built fabrics define the identity of the cities. Cultural rituals tied to specific locations, lakes, temples, and communal spaces contribute significantly to the cultural richness of built spaces.

**Dr Sanghamitra Basu**, Member, Advisory Committee, Architectural Heritage Division, INTACH, New Delhi & Retired Associate Professor, Department of Architecture & Regional Planning, Indian Institute of Technology Kharagpur, stressed the need for architects to draw inspiration from vernacular architecture to meet contemporary built space requirements while maintaining cultural continuity in alignment with sustainability principles. She elaborated on how the characteristics of a region, such as soil type, rainfall intensity, and climatic conditions, influence vernacular architecture. She also shared successful examples of architects transforming modern buildings into more habitable spaces by adhering to these fundamental principles of climate and sustainability.





**Mr Anurag Bajpai**, Director, *GreenTree Global*, discussed the cultural identity of a community in terms of local building byelaws, community engagement, aesthetic preferences, and the use of natural resources. He cited Bharat Mandapam and Yashobhoomi as contemporary examples of built spaces with cultural identity as a parameter. He emphasized the crucial role of culture and heritage in establishing a sustainable built environment for thriving communities. Work culture at the design firm should consider incorporating tradition and values in the modern building as much as possible, Mr Bajpai added.

**Mr Sameer Joshi**, Senior Vice President, *Head - B2B, Godrej Interio*, expressed the need to create spaces that reflect human behaviour and culture. He highlighted how Godrej, over its 125-year history, has connected with people by focusing on human comfort and understanding cultural heritage. He emphasized that understanding human comfort is key to successful designs and plays a vital role in the design of built spaces.



## Key takeaways

Speakers highlighted the impact of embracing traditional practices, architectural styles, and indigenous knowledge to create spaces that are not only environmentally responsible but also socially and culturally meaningful. By integrating local wisdom and materials, we can foster a sense of belonging and community pride, strengthening the connection between people and their environment. The speakers laid focus on the vital connection between culture, heritage, and the empowerment of sustainable communities, envisioning a future that embraces the past while addressing contemporary needs.

# Thematic Track 3

## Circularity in Indigeneity



The thematic track titled “Circularity in Indigeneity” was chaired by **Dr Prodipto Ghosh**, Distinguished Fellow, *The Energy and Resources Institute (TERI)*, who highlighted the detrimental impacts of the industry and highlighted the need for indigenous standards tailored to Indian climatic conditions.

**Ms Paramita Datta Dey**, Head (Resources and Waste), *National Institute of Urban Affairs (NIUA)*, advocated for a harmonious blend of traditional and modernized circularity concepts. Drawing parallels between Indian and Western traditions, she emphasized India’s cultural fluency in circular economy practices. She highlighted that, “the need of the hour is to implement our ancient wisdom for sustainable development.” She outlined four key focus areas, including nature-based solutions, leveraging India’s textile heritage, incorporating ancient wisdom in the built environment, and promoting indigenous food practices. Commending the Mission LiFE initiative, she called for the integration of traditional practices with forward-thinking approaches.





**Prof. Ajay A Deshpande**, Adjunct Professor, Ashank Desai Centre for Policy Studies, *Indian Institute of Technology, Bombay*, addressed the significant impact of building & construction on climate change, attributing 37% of greenhouse gas emissions to the industry. He stressed that the principles of circular economy are crucial for minimizing environmental impact and maximizing resource use. He opined that the “concept of circular economy goes beyond the waste management.” Identifying a gap between conceptualization and implementation, he proposed detoxifying supply chains, establishing recycled product standards, and enforcing existing regulations.



**Mr Aravind Unni**, Urban Poverty Thematic Lead, *Indo-Global Social Service Society (IGSSS)*, highlighted challenges faced by waste picker communities and the loss of essential resources due to formalization. "Until and unless we address the challenges and issues of the marginalized communities, we won't be able to achieve circularity," he added. Stressing the necessity of circularity in urban development, he called for recognizing and formalizing innovations in the informal sector, framing policies with incentives for marginalized communities, and adopting a scientific approach to urban development. He emphasized spatial frameworks, challenged Eurocentric solutions, and called for historical understanding of marginality.



**Mr Tarun Jami**, Founder & CEO, *GreenJams*, started by introducing the concept of turning buildings into carbon sinks and presented GreenJams' carbon-negative concrete. He outlined the uniqueness of concrete, derived from crop residues and byproducts of the steel and power industries. This concrete offers benefits such as thermal insulation, standard sizes, and reduced construction costs. Mr Jami demystified the notion that environmentally friendly products are expensive, citing a 50% reduction in material cost using carbon-negative concrete bricks.

## Key Takeaways

The session explored indigenous solutions for sustainable development in the building industry. Dr Prodipto Ghosh stressed the need for Indian-specific standards. Ms Paramita Datta Dey emphasized blending traditional and modern circularity concepts, focusing on nature-based solutions, textile heritage, ancient wisdom, and indigenous food practices. Prof. Ajay A Deshpande highlighted the circular economy's role in reducing industry-related greenhouse gas emissions. Mr Aravind Unni urged addressing challenges faced by marginalized communities. Mr Tarun Jami showcased GreenJams' carbon-negative concrete, proving eco-friendly practices can reduce costs.

# Thematic Track 4

## Role of Local Economies



The session commenced with setting of context by **Ms Shaily Mahera**, Manager, *GRIHA Council*, who shared her insights on JAN GRIHA (Jan Awas Nirman GRIHA), a certification launched by GRIHA Council in 2022 to promote sustainability among the low-income group. Acknowledging India's commitment to achieving Net Zero Emissions by 2070, she stated that JAN GRIHA aims to make sustainability easily adoptable by the masses, thereby reducing carbon footprint and combating climate change.



**Mr Rahul Bhave**, Executive Director, *National Housing Bank*, as session chair, highlighted the role of National Housing Bank in advancing urban infrastructure. He briefly discussed the Green Deposit Scheme launched by the Reserve Bank of India (RBI).

**Mr Gautam Dey**, Former Executive Director, Country Head - Asset Management, Office fitout, Engineering & Customer Services, *DLF Limited*, shared insights on financing for local economies, emphasizing the role of subsidies in fostering technical innovation and renewable energy security. He stressed the importance of utilizing land for green power initiatives and adopting green fuels for transportation.



**Prof. Vivek Kumar**, *IIT Delhi*, National Co-coordinator, *Unnat Bharat Abhiyan*, highlighted a holistic perspective on the economy, advocating for assessments beyond traditional indicators. He emphasized the evaluation of local economies through economic, environmental, and human dimensions for achieving sustainability. Prof. Kumar suggested equipping students with knowledge contributing to a development of more sustainable society.



**Ar. Vardhan Soi**, Building Science Solutions Team, *Saint-Gobain India Private Limited*, emphasized on the role of innovation by all stakeholders in the building ecosystem for sustainable construction. He stressed the responsibility of companies in manufacturing building materials to focus on both innovation and sustainability for constructing environment-friendly and energy-efficient buildings.

**Mr Karan Mangotra**, Partnership and Strategy Specialist, *International Solar Alliance (ISA)*, emphasized the critical role of access to affordable, continuous, and reliable energy in building resilient local economies. He highlighted that such energy access serves as the fundamental groundwork for various sectors, including agriculture, small businesses, and Micro, Small & Medium Industries (MSMEs), ultimately leading to an enhancement of local incomes. Mr Mangotra further illustrated this point by providing examples of least developed countries and islands, showcasing how they are achieving greater independence and sustainability through the utilization of renewable power sources.



**Mr Deepak Jain**, Chairman, ESG Committee, *Delhi Management Association*, offered a unique perspective by drawing a correlation between sustainability and spirituality. He articulated how nurturing and caring for nature have a direct impact on creating a healthier environment and fostering prosperity within the community.

## Key Takeaways

The session primarily focused on the pivotal role of local economies in shaping the progress and building prosperity in communities. It also discussed the obstacles faced by local economies, such as globalization, constrained resource accessibility, technological deficiencies, and shifting consumer preferences, all of which significantly affect their functioning.

# Thematic Track 5

## Targeting the 2070 Workforce



The session started with the setting of context by **Mr Anupam Buttan**, Senior Manager, *GRIHA Council*, who emphasized the crucial role of schools in instilling environmental sustainability amongst the students. He introduced the GRIHA for Existing Schools rating variant, designed to assess and rate the environmental performance of existing schools. The rating process involves engaging students and teachers in the form of an 'ECO Team,' fostering a proactive attitude to reduce environmental footprints and adopt a greener lifestyle.



The session was chaired by **Ar. Gita Balakrishnan**, Founder and Curator, *Ethos Foundation and ACEDGE*, who highlighted the pivotal role of schools and colleges in shaping sustainable practices. She advocated for a comprehensive and forward-thinking learning approach at the school level. According to Ar. Balakrishnan, this approach aims to nurture well-rounded individuals with adaptability, innovation, social responsibility, and essential skills like critical thinking and digital literacy. She further opined that these skills are fundamental for success in a world shaped by automation, artificial intelligence, and digital technologies.

**Dr Praveen Saxena**, Chief Executive Officer, *Skill Council for Green Jobs*, highlighted the significance of setting a target for achieving carbon neutrality by 2070 to address environmental concerns and combat climate change. He emphasized the need for a comprehensive strategy encompassing various sectors to reduce greenhouse gas emissions and achieve carbon neutrality.





**Prof. (Ar.) Abhay V Purohit**, President, *Council of Architecture (COA)*, reflected on the rapid technological change in the IT industry, drawing from his experience as a professor and Ph.D. student in AI. He spoke about the future of electricity generation, a complex landscape influenced by various factors, including technological advancements, environmental concerns, economic viability, and societal needs. He highlighted the importance of designing buildings for zero carbon emissions and encouraged students to construct green buildings using waste materials.

**Mr Rahul Shrikhande**, Principal Architect, *ARCS design Studio* & Visiting Faculty, *Bharti Vidyapeeth College of Architecture*, highlighted the integration of passive design strategies by architects to reduce energy consumption and enhance sustainability. He urged architects to adopt a multidisciplinary design, incorporating technology, innovation, and AI.



**Dr Sanghamitra Basu**, Member Advisory Committee, Architectural Heritage Division, *INTACH*, New Delhi & Retired Associate Professor, Department of Architecture & Regional Planning, *Indian Institute of Technology Kharagpur*, emphasized standard operating processes in construction. She highlighted critical aspects for enhancing efficiency, transparency, and quality in the construction industry.

## Key takeaways

Focusing on the future workforce in 2070, key considerations involve sustainability, energy, and technology. The intersection of technology, population growth, and education will significantly impact how we approach these challenges. In the pursuit of reducing carbon emissions in architecture and construction, the integration of AI (Artificial Intelligence) stands as a promising solution. AI technologies can revolutionize these sectors by optimizing resource utilization, enhancing design efficiency, and enabling predictive modeling for eco-friendly construction practices. AI's potential in aiding sustainable development and mitigating environmental impact holds significant promise for the future.

# Thematic Track 6

## Inclusivity in Diversity



The thematic track titled, Inclusivity in Diversity, was chaired by **Mr Sanjay Seth**, Vice President and Chief Executive Officer, *GRIHA Council* and Senior Director, *The Energy and Resources Institute (TERI)*. In his remarks he highlighted about the importance of community engagement in achieving sustainability goals. He emphasized the need for inclusivity in discussions around resilience, future-ready habitat, and sustainability, citing the importance of community involvement. Emphasizing the need for inclusivity in these discussions, he drew parallels between the GRIHA rating variants and the “Mission Life” concept introduced by the Hon’ble Prime Minister of India at COP26. Mr Seth advocated for creating an environment where people with disabilities are fully included, enabling their active participation in societal activities and access to essential services without barriers or discrimination.



**Ms Steffi Elsy Xavier**, Artist (Visual / Performing), shared a personal story illustrating her experience with diversity and storytelling. Ms Steffi highlighted storytelling as a powerful tool for fostering inclusivity, connecting people from diverse backgrounds, sharing experiences, and celebrating individual perspectives. Emphasizing educational equity in India, she addressed disparities related to social class and variations in the curriculum across government schools. Ms Steffi stressed the importance of ensuring inclusive and comprehensive education for all students, regardless of socioeconomic status, empowering rural youth with employable skills to address several challenges, for instance migration.

**Dr Renu Khosla**, Director, *Centre for Urban and Regional Excellence (CURE)* India, addressed diversity and inclusion in the workplace, advocating for micro-planning strategies to address systemic issues within organizational structures. She highlighted the importance of intricate and detailed planning at a micro-level to rectify deep-rooted systemic challenges related to diversity, equity, and inclusion. Dr Khosla shared an instance where women using community toilets experience shame and humiliation, highlighting the need to comprehensively address these issues for the creation of more inclusive and dignified sanitation facilities that respect the privacy and needs of women. She concluded by emphasizing the importance of resilience and courage in building a better future for marginalized communities.





**Ms Akhila Sivadas**, Executive Director, *Centre for Advocacy Research (CFAR)*, discussed the multifaceted challenges associated with representing marginalized communities in a diverse nation like India. Ms Sivadas stressed the need for a nuanced understanding of the local context and the intricate nature of challenges faced by different communities to address inequalities related to socio-economic status, caste, religion, gender, geography, and access to resources.

**Ms Adishree Panda**, National Project Coordinator, *UN-Habitat India (United Nations Human Settlements Programme)* empathized on the necessity of inclusive policies and language to ensure that the needs of individuals with disabilities are not overlooked in emergency situations. Ms Panda advocated for a universal design approach, focusing on creating environments, products, and services usable by all individuals, regardless of age, ability, or status.



## Key takeaways

In India, ensuring educational equity is imperative to offer equal opportunities for learning and development to all individuals, irrespective of their socio-economic background or geographical location. Inclusive policies and using inclusive language are vital to prevent the oversight of individuals with disabilities during emergency situations, ensuring that their specific needs are addressed and accommodated effectively. Managing expectations while advocating for or representing marginalized groups can be intricate due to the diverse range of needs, experiences, and perspectives within these communities. It requires a delicate balance of understanding, empathy, and strategic communication to effectively advocate for their rights and needs without homogenizing their experiences. Overall, acknowledging the importance of community engagement, inclusivity, equity in education, inclusive policies, and managing diverse expectations is crucial for creating a more inclusive, equitable, and sustainable society.

# Thematic Track 7

Clean Energy, Green Communities



The thematic track titled, Clean Energy, Green Communities, commenced with **Mr Akash Deep**, Area Convenor and Senior Programme Manager, *GRIHA Council*, providing an overview of the Decarbonising Habitat Programme (DHP). Originating from the commitment aligned with the vision of the Hon'ble Prime Minister of India, the DHP stands as a certification driving towards a zero-carbon mission. Mr Akash emphasized that projects become eligible for certification after operating for over a year with existing infrastructure and permanent employees. The carbon assessment covers parameters such as Energy, Water, Transport, and Social & Lifestyle, with the latter being indicative. Projects undergo evaluation on a scale ranging from 0 to 1+.



**Mr R R Rashmi**, Distinguished Fellow, Earth Science and Climate Change Division, *The Energy and Resources Institute (TERI)*, the session chair, discussed the optimization of land use efficiency through the redesigning of spaces. This involves urban planning strategies, architectural designs, and infrastructure development prioritizing energy-efficient systems, renewable energy integration, and sustainable land use practices. He highlighted the importance of innovation and technology in future development.

**Mr Saurabh Diddi**, Director, *Bureau of Energy Efficiency (BEE)*, Ministry of Power, Government of India, focused on policy, technology, and incentives. He advocated for the incentivization of technology to overcome initial cost barriers, encourage innovation, and foster widespread adoption of low-carbon or carbon-neutral technologies. Mr Diddi highlighted the importance of promoting nature-based solutions and passive design architecture in homes, emphasizing benefits not only for the environment but also for the quality of life.





**Mr Mayur Karmarkar**, Managing Director, *International Copper Association India*, addressed the importance of the mining industry in Africa, which like elsewhere, faces ongoing challenges in reducing its carbon footprint. Full decarbonization of mining operations requires substantial investments, technological innovation, and widespread industry collaboration, he added.

**Mr Nihar Shah**, Presidential Director, Global Cooling Efficiency Program, *Lawrence Berkeley National Laboratory*, highlighted the integration of eco-friendly and climate-responsive features in traditional architectural practices. When thoughtfully adapted, these features contribute significantly to creating more sustainable and resilient communities. Besides that, the integration of technology and innovation with traditional architecture offers a compelling synergy, combining the wisdom of time-tested design principles with modern advancements. This approach aligns with the growing emphasis on sustainable development and resilience in the design and construction of our built environments.



**Mr Jeevan K Jethani**, Scientist-F, *Ministry of New & Renewable Energy (MNRE), Government of India*, elaborated on the importance of renewable energy for the decarbonization of cities and urban habitats. He discussed various programs for rooftop solar systems, along with incentives and subsidies, emphasizing the cost-effectiveness of solar power production in India.

## Key Takeaways

The key takeaway of the session is involving a blend of wisdom from the past with the advancements of the present, paving the way for more sustainable, culturally rich, and environmentally conscious communities. The idea should be promoting nature-based solutions, considering renewable energy systems, and passive design architecture in the construction of built environment.

# Thematic Track 8

## Changing Consciousness and Building Market



The session also witnessed the launch of report *"Technical study on energy & cost savings potential in modern construction buildings using USG Knauf Gypsum board Drywalls"*. This was jointly undertaken by USGKnauf and TERI.



**Mr Ankit Bhalla**, Manager, *GRIHA Council*, commenced the session by addressing the growing awareness surrounding “green” building materials. He introduced the GRIHA Interior Spaces Rating, a new rating variant focusing on aspects like occupant well-being, community engagement, and micro waste management without compromising safety standards.

**Dr Shailesh Kumar Agrawal**, Executive Director, *Building Materials & Technology Promotion Council (BMTPC), Ministry of Housing & Urban Affairs, Government of India*, as session chair, commended GRIHA Council's efforts in sustainable built environments. He highlighted the Government of India's involvement in the *Pradhan Mantri Awas Yojana (PMAY)*, emphasizing sustainability in constructing 11.9 million houses. The Global Housing Challenge in 2019 and the Technology Mela in 2020 showcased innovative construction systems and materials. Dr Agrawal stated that the government in collaboration with organizations such as CPWD and BIS, is working on developing standards and specifications to create an enabling ecosystem for sustainable construction practices.



**Prof. Gunneswara Rao T. D.**, Department of Civil Engineering, *National Institute of Technology, Warangal, Telangana*, emphasized the philosophy of “Sustainability is to live and let live.” He discussed cost-effective technologies like geopolymers concrete, offering long-term emission reductions despite initial high costs.

**Ms Chitra Vishwanath**, Principal Architect and Managing Director, *Biome Environmental Solutions Private Limited*, stressed the need for materials with low embodied energy and reduced waste generation. She advocated for a systemic change in architecture, redefining its role from transient waste to a solution provider. Ms Vishwanath highlighted the importance of accessible, cost-effective materials like bricks from agricultural waste.





**Ms Sonali Rastogi**, Co-Founding Partner, *Morphogenesis*, showcased the Surat Diamond Bourse project, the world's largest office building, facing budget constraints and lacking awareness about sustainability among its 4,500 clientele. She prioritized environmental sustainability and affordability through a reverse methodology approach, setting energy and cost metrics before design, a practice adopted by Morphogenesis thereafter. Local material sourcing during COVID restrictions added to the above-mentioned project's sustainability. Ms Rastogi highlighted this project as a testament to shared vision and collective action, demonstrating adaptability and sustainability through mainstream architecture.

**Mr Sumit Bidani**, CEO, *Knauf India*, presented Knauf's sustainability goals for 2032, emphasizing reduced CO<sub>2</sub> emissions, recyclable packaging, and zero carbon emissions. He highlighted the introduction of the Knauf Safe Board as a lead-free substitute for X-ray rooms, aligning with their sustainability objectives.



**Mr Tanmay Tathagat**, Director, *Environmental Design Solutions (EDS)*, discussed the shift towards ecologically friendly designs, highlighting the critical role of design in ensuring environmental sustainability. He emphasized an iterative and integrated process, considering locally sourced materials, reduced water usage, energy production, and waste minimization in building material choices.

## Key Takeaways

Mr Ankit Bhalla introduced the GRIHA Interior Spaces Rating, prioritizing occupant well-being and waste management. Dr Shailesh Kumar Agrawal commended GRIHA Council's sustainable built environments initiatives, emphasizing India's commitment in PMAY. Prof. Gunneswara Rao advocated cost-effective technologies like geopolymers for long-term emission reductions. Ms Chitra Vishwanath stressed low embodied energy materials, calling for a systemic change in architecture. Ms Sonali Rastogi showcased the Surat Diamond Bourse project, emphasizing environmental sustainability, affordability, and community support. Mr Sumit Bidani presented Knauf's 2032 sustainability goals, focusing on emissions reduction and recyclable packaging. Mr Tanmay Tathagat highlighted the shift towards ecologically friendly designs, emphasizing design's crucial role in environmental sustainability.

# Thematic Track 9

## Decoding Sustainable Fashion



The thematic track titled, Decoding Sustainable Fashion, was chaired by **Ms Shabnam Bassi**, Deputy CEO-Cum-Secretary & Treasurer, *GRIHA Council & Director, The Energy and Resources Institute (TERI)*. Ms Bassi highlighted the importance of circular fashion in shaping a sustainable industry for the future. Circular fashion entails the establishment of a closed-loop system wherein clothing items, materials, and resources are continuously reused, recycled, or repurposed, thereby minimizing waste and environmental impact. To foster a more sustainable fashion industry, Ms Bassi emphasized the necessity for collaborative efforts across the supply chain, involving designers, manufacturers, retailers, consumers, and policymakers. She highlighted the imperative of taking conscious steps, adopting innovative approaches, implementing supportive policies, and cultivating a culture of responsible consumption and production.



Offering a unique perspective, **Ms Steffi E Xavier**, an Artist (Visual/Performing), explored the intricate dynamics between fashion choices and local communities. She shed light on the challenges posed by trends in the fashion industry, particularly with regard to sustainability, consumer behaviours, and the rapid turnover of trends. Ms Xavier cautioned against cultural appropriation in fashion, emphasizing its potential to displace and misrepresent certain communities. Advocating for the celebration of diversity without causing displacement or disrespect, she stressed the importance of respecting cultural identities, promoting inclusion, and ensuring fair representation and acknowledgment within the fashion industry.



**Prof. Bhaskar Mitra**, Director – School of Design, *Presidency University Bangalore*, delved into the commercialization of the “feel-good factor” in the contemporary fashion industry. Drawing from India’s cultural heritage of sustainability, he emphasized the importance of promoting conscious consumption, spreading education and awareness, and preserving and promoting traditional practices. Prof. Mitra highlighted that by integrating these approaches, both individuals and the fashion industry can work towards a more sustainable future. He encouraged drawing inspiration from India’s cultural heritage while adapting to the demands of modern digitalization and consumer behaviour.



**Mr K Narayan**, Director Garmenting Operations & Outsourcing, *Raymond Ltd. (Garmenting Division)*, brought attention to the significant impact of fast-paced fashion choices and the increasing focus on sustainability within the industry. He emphasized the growing responsibility of individuals in making mindful fashion choices, citing Silver Spark Apparel Ltd.'s commitment to advancing sustainable fashion through the integration of eco-friendly practices in manufacturing processes. Mr Narayan stressed the urgency for citizens to take accountability for their fashion decisions, highlighting the pivotal role consumers play in steering the industry towards more sustainable practices.

## Key Takeaways

The key takeaways from the Decoding Sustainable Fashion session include Ms Shabnam Bassi's emphasis on circular fashion's role in creating a sustainable industry. Collaboration across the supply chain is crucial, necessitating conscious steps, innovative approaches, and supportive policies. Ms Steffi E Xavier highlighted challenges related to sustainability and cultural appropriation, advocating for diversity celebration with respect. Prof. Bhaskar Mitra emphasized merging tradition with modern demands for sustainability. Mr K Narayan highlighted the industry's responsibility and urged consumers to make mindful, sustainable fashion choices.

# GRIHA Trophy at NASA

## Celebrating the decade of GRIHA Trophy at NASA

The GRIHA Trophy celebration at NASA marked a decade of sustainable design excellence. Previous year's winners, industry experts along with students from various colleges Pan India were part of the event. The open house discussion showcased the vibrant engagement of both students and professionals, emphasizing the pivotal role of collaborative conversations in fostering a resilient and sustainable future.



**Mr Sanjay Seth**, Vice President & Chief Executive Officer, *GRIHA Council* and Senior Director, *The Energy and Resources Institute (TERI)*, felicitated the students and the winners of the last 10 years at the open house discussion. In his welcome address, he emphasized how GRIHA NASA association has fostered and provided platform for discussion on environmental awareness, sustainable practices in built environment and climate responsive strategies among students.

**Ar. Gita Balakrishnan**, Founder and Curator, *Ethos Foundation and ACEDGE*, highlighted the significance of inclusive designing for sustainability, advocating for universal design practices that consider the impact on communities. She stressed that architects must extend their focus beyond the construction site, emphasizing the far-reaching consequences of design decisions.





**Mr Rahul Dadheech**, General Manager - Facility Management, 32<sup>nd</sup>, contributed valuable insights by highlighting the tangible benefits of green building practices. He cited a remarkable 45% reduction in energy consumption compared to GRIHA norms at the 32nd milestone, His impassioned plea for a mindful approach to building design resonated with the audience, encouraging them to consider the longevity of structures and their enduring impact on occupants.

**Mr Vardhan Soi**, Building Science Solutions Team, *Saint Gobain India Pvt. Ltd.* - R&D, reflected on the GRIHA NASA Trophy's role in introducing him to sustainability during college. He urged a holistic approach, emphasizing the need to integrate sustainability into lifestyle choices, not just architectural design. He acknowledged the multifaceted nature of sustainability, encouraging individuals to identify their niche for impactful contributions at various stages.



# Valedictory Session



In the culminating session of the 15<sup>th</sup> GRIHA Summit, a valedictory, exemplary performance awards ceremony, and cultural evening were organized. The event commemorated and commended projects that demonstrated exceptional dedication and achievement in advancing the cause of sustainability.



**Dr Vibha Dhawan**, President, *GRIHA Council* and Director General, *The Energy and Resources Institute (TERI)*, extended a warm welcome and expressed gratitude to the distinguished speakers, delegates, and participants. In her address, she highlighted the critical role of standards and energy efficiency in addressing the needs of both rural and urban areas in the subcontinent. Dr Dhawan emphasized the crucial role of behavioural change in translating intentions into actions and advocated for strengthening the institutional framework to build resilient communities. She highlighted the importance of mainstreaming mindful consumption of resources into national and global deliberations and stressed the significance of community participation and the utilization of local materials over conventional alternatives.



**H.E. Mr Freddy Svane**, Ambassador, *Royal Danish Embassy, New Delhi, India*, acknowledged the groundbreaking sustainability work in India and commended the efforts of GRIHA Council in the realm of green infrastructure. Stressing the importance of collective responsibility in achieving sustainability, Mr Svane urged the preservation of traditional values while moving forward. He also lauded the positive outcomes anticipated for India from the recently concluded COP28, expressing a desire to both inspire and be inspired by the Indian populace.

**Dr Ajay Mathur**, Director General, *International Solar Alliance (ISA)*, emphasized the relevance of interventions in the building envelope, citing the challenges faced by sustainable materials in entering the building market. He called for a reassessment of standards and interventions in the dismantling of solar PVs in the building sector, highlighting that change is the only constant and expressing confidence in GRIHA Council's continuous commitment to sustainability.



**Smt. Leena Nandan** Secretary, *Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India*, shed light on the Eco Mark scheme instituted by the Government of India for labelling environmentally friendly products. She emphasized the need for materials with increased recycled content and advocated for a concentrated research and innovation approach to improve construction practices in India. She lauded the well-designed, scientifically structured, and authenticated nature of the GRIHA rating system.

The 15<sup>th</sup> GRIHA Summit featured the release of the *GRIHA's Impactful 50 - Beyond Green Building Blocks* coffee table book, showcasing case studies of the highest-rated, newly constructed projects across various climate zones in India, including GRIHA, Small Versatile Affordable GRIHA (SVAGRIHA), GRIHA for affordable housing (GRIHA AH), and GRIHA for large development (GRIHA LD) ratings. This book offers a comprehensive understanding of the measures taken to reduce carbon footprint and ecological impact in the built environment.



Release of 'GRIHA's Impactful 50 – Beyond Green Building Blocks' coffee table book during the Valedictory session of 15<sup>th</sup> GRIHA Summit in the presence of eminent dignitaries. Mr Sanjay Seth, Dr Ajay Mathur, Smt. Leena Nandan, H.E. Mr Freddy Svane and Dr Vibha Dhawan (from L to R)



**Mr Sanjay Seth**, Vice President and Chief Executive Officer, *GRIHA Council* and Senior Director, *The Energy and Resources Institute (TERI)*, expressed gratitude to dignitaries, media partners, sponsors, participants, and colleagues at the Summit, emphasizing the need for integrating sustainability into daily lives to further propel the movement. The event concluded with a cultural programme followed by networking dinner.



# Rated projects for the year 2023-2024

Sl. No.	Rated project	Location	Rating Star	Rating variant
1	New Laboratory Complex "Center of Excellence" Geological Survey of India	Karnataka	4 Star	GRIHA Provisional Rating
2	Aarvy Healthcare Pvt. Ltd.	Haryana	4 Star	GRIHA Provisional Rating
3	All India Institute of Medical Sciences at Gorakhpur	Uttar Pradesh	3 Star	GRIHA Provisional Rating
4	Corona Optus, Tower - A & B, Sec 37-C	Haryana	4 Star	GRIHA Provisional Rating
5	Government of India Press	Delhi	3 Star	GRIHA Provisional Rating
6	Mother & Child Block, All India Institute of Medical Sciences	Delhi	3 Star	GRIHA Provisional Rating
7	NABARD Regional Office	West Bengal	3 Star	GRIHA Provisional Rating
8	Office Cum Residential Complex for Narcotics Control Bureau	Gujarat	3 Star	GRIHA Provisional Rating
9	Post Graduate Institute & Super Specialty Hospital at RSP, Sail	Odisha	4 Star	GRIHA Provisional Rating
10	Sawai Man Singh Super Specialty Hospital	Rajasthan	3 Star	GRIHA Provisional Rating
11	Utkarsh Tower	Uttar Pradesh	5 Star	GRIHA Provisional Rating
12	Construction of Hostel Research Scholars at CSIR-NEIST	Assam	3 Star	GRIHA Provisional Rating
13	Omaxe Chowk, Chandni Chowk	Delhi	3 Star	GRIHA Provisional Rating
14	NLC India Limited Registered Office	Tamil Nadu	3 Star	GRIHA Provisional Rating
15	Super specialty hospital and other facilities for Dr. B. C. Roy Institute of Medical Sciences & Research at Indian Institute of Technology, Kharagpur	West Bengal	3 Star	GRIHA Provisional Rating
16	OFFICE BUILDING, CMPDI, RHV, NAGPUR	Maharashtra	3 Star	GRIHA Provisional Rating

Sl. No.	Rated project	Location	Rating Star	Rating variant
17	Additional Exhibition cum Conventional Hall at KTPO premises, Bengaluru	Karnataka	3 Star	GRIHA Provisional Rating
18	All India Institute of Medical Sciences	Punjab	3 Star	GRIHA Final Rating
19	El Bhawan	Maharashtra	4 Star	GRIHA Final Rating
20	The Camellias	Haryana	3 Star	GRIHA Final Rating
21	Zydus Sitapur Hospital	Gujarat	3 Star	GRIHA Final Rating
22	Indian Institute of Management, Nagpur - Phase 1	Maharashtra	4 Star	GRIHA LD
23	Atrey Design Studio, New Delhi	Delhi	4 Star	SVAGRIHA
24	Public Works Rest House, Degloor, Dist. Nanded, Maharashtra	Maharashtra	4 Star	SVAGRIHA
25	Construction of New Building for Kanpur Divisional Office & Kanpur Indane Divisional Office, Uttar Pradesh	Uttar Pradesh	3 Star	SVAGRIHA
26	GAIL (India) Limited, Office Building at Ludhiana, Urban Estate, Phase-3, Dugri, Ludhiana, Punjab	Punjab	3 Star	SVAGRIHA
27	K M Trans Logistics Headquarter Building, Jaipur, Rajasthan	Rajasthan	5 Star	SVAGRIHA
28	Milestone Indigo, Surat, Gujarat	Gujarat	2 Star	SVAGRIHA
29	Construction of New Court Building at Ausa, Latur, Maharashtra	Maharashtra	4 Star	SVAGRIHA
30	Om Ganesh Krupa CHS, S.No. 30/ H. No. 1 (P), Katrap, Badlapur East, Maharashtra	Maharashtra	5 Star	SVAGRIHA
31	Reconstruction of HPCL Petrol Pump, Pick N Drive, Meera Bagh, New Delhi	Delhi	5 Star	SVAGRIHA
32	Sub Treasury Office, Gohar, Mandi, Himachal Pradesh	Himachal Pradesh	3 Star	SVAGRIHA
33	Sub Treasury Office, Kuthar, Solan, Himachal Pradesh	Himachal Pradesh	4 Star	SVAGRIHA

Sl. No.	Rated project	Location	Rating Star	Rating variant
34	PG Hostels (Male), Dr. Rajendra Prasad Government Medical College	Himachal Pradesh	4 Star	SVAGRIHA
35	PG Hostels (Female), Dr. Rajendra Prasad Government Medical College	Himachal Pradesh	4 Star	SVAGRIHA
36	Arunoday CHS	Maharashtra	5 Star	SVAGRIHA
37	Sub Treasury Building Chowari (Official-cum-Residence)	Himachal Pradesh	5 Star	SVAGRIHA
38	Sub Treasury Office Building, Fatehpur, Chandigarh	Chandigarh	4 Star	SVAGRIHA
39	Sub Treasury Office & Residential Building Arki	Himachal Pradesh	4 Star	SVAGRIHA
40	IIT Patna Phase-I Project	Bihar	4 Star	GRIHA EB
41	ReNew Office Building	Haryana	5 Star	GRIHA EB
42	Zonal Training Centre, "Jeevan Vidya" Life Insurance Corporation of India	West Bengal	4 Star	GRIHA EB
43	Jeevan Prakash Building, Divisional Office-1 Campus	Rajasthan	4 Star	GRIHA EB
44	PM Shri Jawahar Navodaya Vidyalaya School Pekhubela	Himachal Pradesh	5 Star	GRIHA for Existing Schools
45	PM Shri Jawahar Navodaya Vidyalaya School Sitapura	Rajasthan	5 Star	GRIHA for Existing Schools
46	ABB Nashik	Maharashtra	-	Water Positive
47	LHP Indore	Maharashtra	4 Star	GRIHA AH
48	Establishment of New Civil Enclave at Adampur	Punjab	4 Star	GRIHA Provisional Rating
49	Commercial Complex, Sector-16, Gurugram, Developed by Brahma Center Development Pvt Ltd, Gurugram	Haryana	5 Star	GRIHA Provisional Rating
50	New Sports Complex at NITK, Surathkal	Karnataka	3 Star	GRIHA Provisional Rating

# Exemplary Performance Awards 2023

Sl. No.	Category	Project Name	Result	Registered Under
1	Passive architecture design	Hindu Hriday Samrat Balasaheb Thackeray Memorial, Badlapur, Maharashtra	Winner	GRIHA
		300 Bedded District Hospital at Namchi, South Sikkim	1st Runner-up	GRIHA
2	Sustainable building materials/ technologies	Construction of Civil Aviation Research Organization (CARO) Complex near Begumpet Airport, Hyderabad, phase 1	Winner	GRIHA
3	Renewable energy utilization	State of the Art Office building and Campus for MEDA, Aundh, Pune	Winner	GRIHA
		Income Tax Office, Bhopal	1st Runner-up	GRIHA
4	Site management (during construction)	Construction Of New Campus of PT. Jawaharlal Nehru Govt. Medical College and Hospital, Chamba HP	Winner	GRIHA
		Government Medical College, Haridwar	1st Runner-up	GRIHA
		Proposed Administrative Building in S.V.N.I.T Campus, Surat	2nd Runner-up	GRIHA
5	Construction workers health and safety (during construction)	Staff Quarters and Amenities For Reserve Bank Of India, Navi Mumbai	Winner	GRIHA
		AIIMS Bibingar, Hyderabad	1st Runner-up	GRIHA
6	Existing Schools	MAHARAJA SAWAI BHAWANI SINGH SCHOOL, Jaipur	Winner	-
		Delhi Public School Rohini, Delhi	1st Runner-up	-
		EDIFY SCHOOL, Tiruchanoor	2nd Runner-up	-
7	Existing Buildings	The NorthCap University, Gurugram	Winner	-
		BrigadeTechGardens, Bengaluru	1st Runner-up	-
		Jeevan Prakash Building, Divisional Office-1 Campus, Life Insurance Corporation of India, Jaipur	2nd Runner-up	-





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