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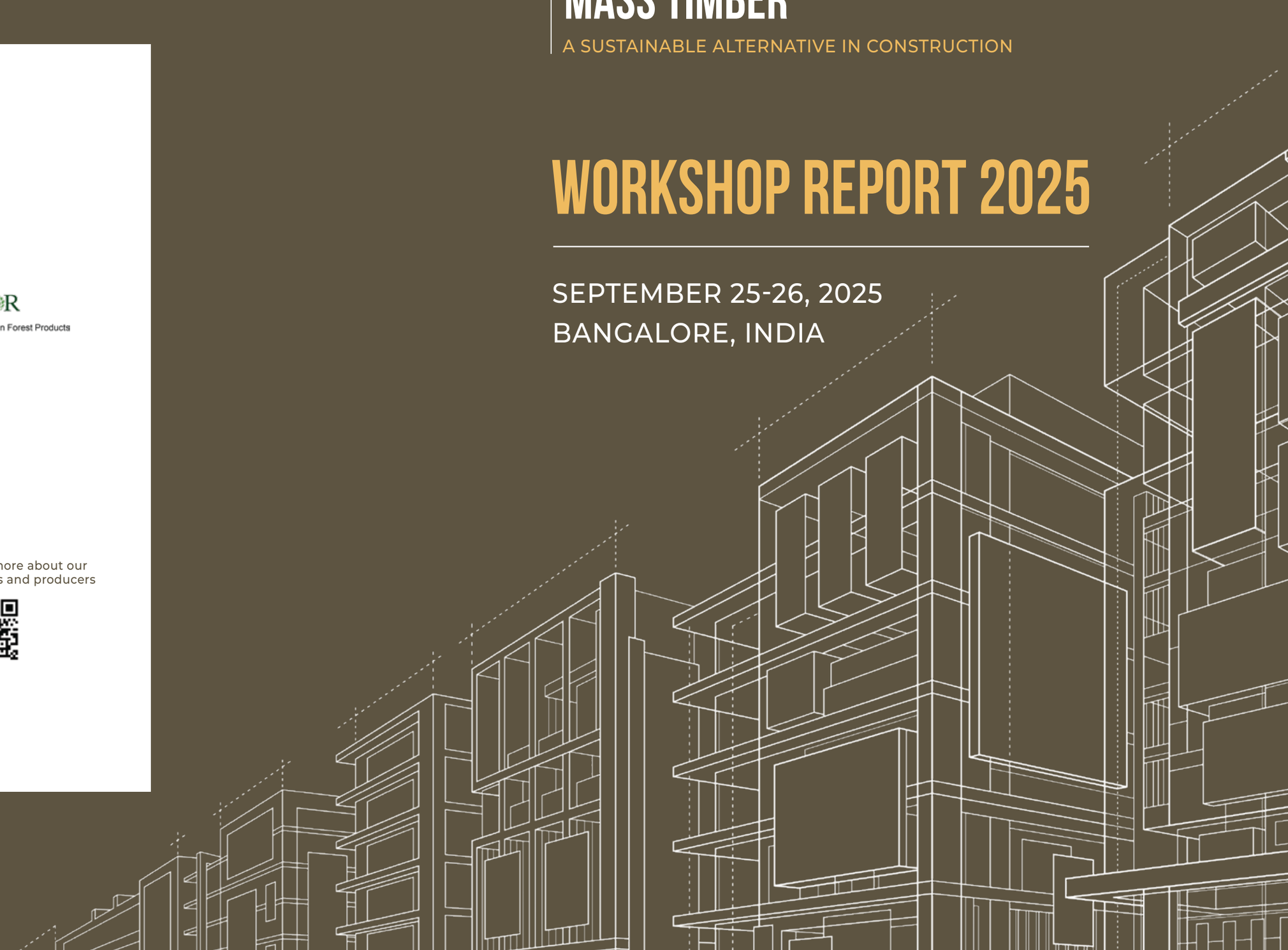
MASS TIMBER

A SUSTAINABLE ALTERNATIVE IN CONSTRUCTION

WORKSHOP REPORT 2025

SEPTEMBER 25-26, 2025
BANGALORE, INDIA



On September 25-26, 2025, industry leaders, policymakers, researchers, architects and sustainability advocates converged in Bangalore for a workshop titled ‘Mass Timber: A Sustainable Alternative in Construction’.

This two-day event, organized by the Softwood Export Council (SEC)at the Institute of Wood Science and Technology (IWST), aimed to catalyze India's transition towards net-zero construction by exploring the vast potential of mass timber.

The workshop set out to explore the adoption of Mass Timber Building Systems in India, including building code integration, environmental impact, supply chain development, and innovative financing models for this sustainable building system.

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ABOUT THE ORGANISERS

SOFTWOOD EXPORT COUNCIL (SEC)

The Softwood Export Council (SEC), represents the U.S. softwood industry in promoting sustainable wood products in international markets.

INSTITUTE OF WOOD SCIENCE AND TECHNOLOGY (IWST)

The Institute of Wood Science and Technology (IWST) is a premier research institute dedicated to the advancement of wood science and technology in India.

THE WORKSHOP IN NUMBERS

DELEGATE DEMOGRAPHICS

INDUSTRY BREAK-UP
+ Timber merchants
+ Construction
+ Architects
+ Researchers
+ Policymakers
+ Students

CITY BREAK-UP
+ Bangalore
+ Kolkata
+ Goa
+ Delhi
+ US
+ Mumbai

FUTURE COLLABORATIONS (possible / in the pipeline) / TANGIBLE OUTCOMES
+ XYZ
+ XYZ

GRAPHS & INFOGRAPHICS TO SHOW REACH & IMPACT

WORKSHOP WORDLE

This was the result of a collaborative exercise from the workshop delegates.

WORKSHOP AGENDA

DAY 1: SEPTEMBER 25, 2025

Theme: Global Insights, Environmental Impact and Material Innovation

9:00 – 9:45 AM: Registration and Tea

9:45 – 10:20 AM:
WELCOME SESSION: NOTES AND WORKSHOP VISIONING

- Welcome Note and Brief Note on IWST's Vision for Mass Timber – Shakti Singh Chauhan, Director, Institute of Wood Science and Technology (IWST)
- US-India Trade Dynamics and Necessary Trade Linkages that can help with Mass Timber Constructions in India's Net-Zero Transition – Nicole Podesta, Senior Agricultural Attaché (U.S. Embassy, Mumbai)
- Recap of the 2024 Mass Timber Workshop and Priorities Moving Forward – Anindita Bhattacharyya, India Representative, Softwood Export Council (SEC)
- India's Building Codes and the Role of Mass Timber – Arijit Sinha, Professor of Structural Engineering, Oregon State University

10:20 AM – 12:30 PM:
KEYNOTE SESSION 1: Green Built Environment Initiatives in India and the Role Mass Timber could Play?
Chaired by Indroneil Ganguly, Professor, University of Washington

- Mass Timber-based Construction in India: Challenges and Opportunities – Shakti Singh Chauhan, Director, Institute of Wood Science and Technology (IWST)
- Linking Green Credit Program – Amit Anand, Deputy Inspector General, Forest Policy, Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India
- Mass Timber Building Code – Arun Kumar, Head, Civil Engineering Department, Bureau of Indian Standards (BIS)
- India's Built Environment at a Crossroads: Why Mass Timber? – Halarameshwara C. Secretary, National Real Estate Development Council (NAREDCO), Karnataka
- Mass Timber for Sustainable Cities: Focusing on Bengaluru's Climate Action and Resilience Plan – Shrimoyee Bhattacharya, Program Lead, Urban Development, WRI India

12:30 – 1:30 PM – Lunch and Networking

1:30 – 3:20 PM:
SESSION 1: Tall Timber in the Tropics: Engineering the Future
Chaired by Amitava Sil, Scientist, IWST

- Fire, Structural and Seismic Standards for Mass Timber – Arijit Sinha, Professor of Structural Engineering, Oregon State University
- Adoption of Mass Timber in the International Building Code – Todd Beyreuther, Washington State University
- Mass Timber Construction in the Private Sector in India: Engineering Difficulties Faced – Aviral Sharma, Senior Architect, A Sharma Associates
- Mass Timber in the Tropics and Suitability of Tropical Species – Indroneil Ganguly, Professor of Environmental Science, University of Washington
- Wrap-up by the Chair and Open Questions (if any)

3:20 – 4:00 PM – High Tea and Networking

4:00 – 5:30 PM:
SESSION 2: Made in India – Manufacturing and Supply Chains
Chaired by Arijit Sinha, Oregon State University

- Presentation by Jack Hammer India Pvt Ltd – Mahavir Agarwal
- Presentation by CUBE Architects and Interior Design – Anne Fatima Tunreena
- Presentation by Build Unique – Nikesh Rathod
- Presentation by Rothoblaas – Bharat Mehta
- Wrap-up by the Chair and Open Questions (if any)

5:30 – 6:30 PM: Discussion Session: Moderated by Indroneil Ganguly and Arijit Sinha

DAY 2: SEPTEMBER 26, 2025

Theme: Scaling Mass Timber in India: Building Sustainably, Financing Smartly, Sourcing Strategically

9:00 – 10:00 AM: Registration and Tea

10:00 AM – 12:30 PM:
KEYNOTE SESSION 2: Mass Timber Adoption and Growth Opportunities in India
Chaired by Indroneil Ganguly, University of Washington

- Bridging the Gap: Can Imported Timber Complement Local Sources for Scalable and Sustainable Mass Timber Construction – M.P. Singh, Director, Federation of Indian Plywood and Panel Industry
- Innovative Financing Models to Bridge the Upfront Cost Gap in Mass Timber Construction – Jyoti Prakash Gadia, Resurgent India Limited- Representative of NAREDCO
- Role of FKCCI to Unite Banks, Insurers, Developers and Policymakers to Address Financing Barriers (high upfront costs) and Build Market Confidence – N. Vinay Gupta, General Secretary, Federation of Karnataka Timber Merchants and Saw Millers (Representing the All-India Timber Merchants Federation)
- Overcome Roadblocks to Mass Timber Made in India – Vivek Abhilash, Founder, Artius Interior Products Pvt Ltd.
- Role of Technology in Large-scale Adoption of Mass timber – Todd Beyreuther, Washington State University
- Reframing Public Procurement: From Lowest Cost to Holistic Value to Attain Net Zero Target – N.N.S.S. Rao, Additional Director General, CPWD Region, Bangalore
- Mass Timber Construction Through Plug and Play 3D Volumetric Modules – Vishal Singh, Associate Professor, Indian Institute of Science (IISC), Bangalore

12:30 – 1:30 PM – Lunch and Networking

1:30 – 2:30 PM:
SESSION 3: Build with Mass Timber in India: Supply Chain and Species Suitability
Chaired by Arijit Sinha, Oregon State University

- Strength, Supply and Sustainability: Why North American Softwood Could Fit India's Needs for a Domestic Mass Timber Industry – Anindita Bhattacharya, India Representative, SEC
- Hybrid Mass Timber: Blending wood species for optimized resource use – Anil Kumar Sethy, IWST
- Build with Mass Timber – Anurag Khandelwal, Founder, Woodstyle
- Scoping Activities for 2026 – 2027: What Role will you Play?

Discussion led by the Softwood Export Council (SEC) and Concluding Remarks

WORKSHOP PROCEEDINGS

Knowledge exchange, expertise and recommendations

WELCOME SESSION AND VISIONING

Shakti Singh Chauhan, Director of IWST, opened the session by setting the institutional vision for mass timber in India. He framed the material as a crucial component for sustainable construction and a key enabler for the country's transition to a net-zero future.

Nicole Podesta from the **U.S. Embassy** focused on the trade relationship between the U.S. and India concerning mass timber. She highlighted the significant volume of forest product exports from the U.S., noting that pine logs alone constituted 42% of these exports in 2024. While identifying India as a major market, she also pointed to specific challenges hindering trade, namely India's import tariffs and the integrated GST applied to both logs and non-log forest products.

Anindita Bhattacharya of the **Softwood Export Council** provided a comprehensive update on recent initiatives and research. She shared findings from a 2023–24 market survey and detailed collaborative efforts with key Indian organizations. A significant outcome she highlighted was the consensus to include ten timber species, including U.S. softwoods, in India's National Building Code. She also reported on IWST's successful testing of Cross-Laminated Timber (CLT) and Glue-Laminated Timber (GLT) using local species and the finalization of testing protocols for U.S. species. Looking ahead, she announced that a September 2025 workshop would focus on technical aspects like structural design and fire safety.

The session also outlined clear goals and a roadmap for mass timber adoption in India. This strategic plan includes short-term goals for 2025, such as completing IWST testing and securing government support, medium-term goals for developing construction guidelines, and a long-term vision to establish mass timber as a mainstream sustainable solution.

Finally, **Arijit Sinha** from **Oregon State University** addressed the technical and regulatory aspects of integrating mass timber into the Indian construction landscape. His presentation delved into specific mass timber products like CLT and Mass Plywood Panels (MPP) and discussed the critical ongoing work of developing Indian Standard Codes to govern their use.

KEYNOTE SESSION 1:
GREEN BUILT ENVIRONMENT INITIATIVES IN INDIA AND THE ROLE MASS TIMBER COULD PLAY?

The session, chaired by **Indroneil Ganguly**, established a compelling case for mass timber as a cornerstone for India's sustainable construction future. Dr. Ganguly set the stage by highlighting mass timber's significant environmental advantage, noting its net-negative carbon footprint and its potential contribution to green credit systems. He supported this with Life Cycle Analysis (LCA) data, demonstrating that mass timber buildings offer substantial benefits over traditional concrete structures.

Identifying Challenges and Opportunities

Shakti Singh Chauhan (IWST) directly addressed the practical realities of adopting mass timber in India. While emphasizing the crucial transition from traditional timber to engineered mass timber, he outlined key challenges including R&D gaps, the need for technology and skill development, limited local manufacturing, and safety concerns regarding fire and humidity. Despite these hurdles, he stressed the significant opportunities for employment generation and local industry development.

The Imperative for Adoption in a Growing Nation

This sense of opportunity was echoed by **Halarameshwara C.** from **NAREDCO**, who positioned mass timber as an essential, sustainable alternative for India's rapidly expanding construction sector. **Shrimoyee Bhattacharya** from **WRI India** provided the critical data to support this, projecting the building sector to become a USD 1.4 trillion industry by 2030. She outlined the urgent need to decarbonize this sector, which currently contributes 25% of India's GHG emissions. While identifying barriers like high upfront costs and regulatory gaps, she also pointed to massive opportunities for a green transition, given that construction is India's second-largest employer and aligns with the Net Zero by 2070 goal.

Building the Regulatory and Policy Framework

The discussion then shifted to the necessary frameworks for enabling this transition. **Arun Kumar** of **Bureau of Indian Standards (BIS)** detailed the critical role of building codes, explaining the standards for key mass timber products like CLT and GLT and addressing vital safety aspects like fire sealing. Concurrently, **Amit Anand** from the **Ministry of Environment, Forest and Climate Change (MoEFCC)** presented a powerful policy incentive, proposing the linkage of mass timber with the Green Credit Programme (GCP). He explained how this could create a tradable credit system and an EcoMark label, incentivizing sustainable practices across the entire timber value chain.

Open Discussion: Key Questions for the Future

The session concluded with an open discussion that crystallized the main themes. Key questions emerged about whether mass timber should replace or complement conventional materials like steel and concrete in hybrid systems. Participants also debated scalability, the need to create market demand, and the importance of ensuring a sustainable and certified supply chain for raw timber. The resource efficiency and end-of-life recyclability of mass timber were highlighted as major advantages over traditional materials, underscoring its role in a circular economy.

SESSION 1:
TALL TIMBER IN THE TROPICS: ENGINEERING THE FUTURE

Chaired by **Amitava Sil**, this session provided a deep dive into the technical, economic, and practical dimensions of integrating mass timber into the Indian construction sector.

Establishing a Robust Regulatory and Safety Framework

The session began by addressing the critical need for updated standards. **Arijit Sinha** emphasized that for mass timber to be adopted broadly, building codes must be revised to account for its unique performance in fire and seismic conditions, moving towards performance-based design. Echoing this, **Todd Beyreuther** highlighted the successful integration of mass timber into the International Building Code (IBC) as a crucial step for its legitimization, underscoring the role of academic research in bridging the gap between science and policy.

Techno-Economic Viability and Manufacturing Imperatives

A significant portion of the discussion focused on the supply chain and economic hurdles. Experts outlined the need for an efficient, end-to-end system from sourcing certified "E-grade" raw timber to optimized manufacturing. Reducing costs through scale, establishing standardized strength and stiffness certifications for Cross-Laminated Timber (CLT), and leveraging modular construction technology were identified as key strategies to improve quality control, speed up construction, and enhance overall viability.

Confronting On-the-Ground Challenges in the Indian Private Sector

Aviral Sharma provided a critical perspective from the private sector, detailing the significant barriers to adoption in India. These include engineering knowledge gaps, outdated codes, a fragile supply chain with a shortage of skilled labor and certified materials, and high initial costs. He also highlighted specific technical challenges such as structural complexity, moisture and pest vulnerabilities, and the need for tailored solutions for fire safety and acoustics in different building types.

Synthesized Strategies and Climate-Specific Research

The session concluded with a set of general recommendations, calling for comprehensive policy reforms, awareness campaigns, and investments in R&D and training. **Indroneil Ganguly** brought the focus to India's specific context, discussing the suitability of mass timber for tropical climates and the potential of using both imported systems and locally sourced tropical species. He proposed the development of a dedicated Indian mass timber standard that addresses critical local concerns such as pest control and soil treatment, ensuring the technology is adapted for long-term success in the region.

SESSION 2:
MADE IN INDIA – MANUFACTURING AND SUPPLY CHAINS

Chaired by **Arijit Sinha**, this session brought together key industry players—including **Jackhammer India Pvt Ltd**, **Rothoblaas**, **Cube Architects and Interior Design**, and **Build Unique**—to focus on the practical development of a domestic mass timber ecosystem. The central theme was a collective emphasis on establishing and strengthening domestic manufacturing capabilities for mass timber within India.

Presenters discussed the critical need to build resilient and efficient local supply chains, moving from reliance on imports to self-sufficiency. A key strategy highlighted to achieve this was the modular integration of mass timber components, leveraging prefabrication to enhance quality, reduce construction timelines, and minimize waste.

In essence, the session provided a ground-level view of the industry's push to translate the potential of mass timber into a tangible "Made in India" reality, focusing on local production, robust supply networks, and modern construction methodologies.

KEYNOTE SESSION 2: MASS TIMBER ADOPTION AND GROWTH OPPORTUNITIES IN INDIA

Chaired by **Indroneil Ganguly**, this session delved into the market dynamics, financial mechanisms, and policy shifts required to catalyze the growth of mass timber in India.

Shifting Market Perception and Building Demand

The session began by addressing the fundamental challenge of market perception. **Vishal Singh (IISC)** framed the issue around value perception, questioning how to convince customers to choose wood—positioned as a higher-quality, sustainable option—over cheaper, conventional concrete. This theme was expanded by **M.P. Singh** (**Federation of Indian Plywood and Panel Industry**), who provided context on India's timber economy, noting that the country largely consumes what it produces. He emphasized that imports are necessary to complement local sources and build a sustainable supply.

Navigating Financial and Supply Chain Barriers

A significant focus was placed on the practical hurdles to adoption. **N. Vinay Gupta** (**Federation of Karnataka Timber Merchants**) highlighted critical barriers in financing, sourcing, and a lack of standards, starkly observing that currently, "mass timber is not for mass, it is for class." In response, **Jyoti Prakash Gadia** (**Resurgent India Ltd**) outlined innovative financing models, arguing that mass timber's faster construction times reduce interest costs and that green-certified buildings can access loans with 0.5–1% lower interest rates.

The Critical Role of Policy and Public Procurement

The discussion culminated with the pivotal role of government in driving demand. **N.S.S. Rao (CPWD)** advocated for a fundamental shift in public procurement policies—from selecting the lowest cost to evaluating holistic value to meet net-zero targets. He acknowledged challenges in supply and technology but pointed to a government push to source from "trees outside forests." His key message was that the first step is to create demand for local timber, which would be supported by government incentives like tax benefits and extended loan tenures. He concluded by noting that while green goals can be met with various materials, mass timber presents a specific pathway to achieve them.

SESSION 3:
BUILD WITH MASS TIMBER IN INDIA: SUPPLY CHAIN AND SPECIES SUITABILITY

Chaired by **Arijit Sinha**, this session provided a focused examination of the practical hurdles and material opportunities for establishing a mass timber industry in India, covering supply chain challenges, species suitability, and environmental imperatives.

Identifying Roadblocks to Domestic Production

The discussion began by confronting the significant barriers to "Made-in-India" mass timber. **Vivek Abhilash** outlined key obstacles, including deep-seated perception barriers such as a cultural affinity for concrete, fears about fire safety, and a lack of awareness among professionals. He also highlighted concrete economic and supply chain challenges, namely the high capital investment required, uncertain raw material supply, and the current cost disadvantage when compared to conventional concrete.

Exploring Material Options: Local and Imported Species

A central theme of the session was evaluating which timber species are suitable for the Indian market. **Anindita Bhattacharya** made the case for North American softwoods like Douglas Fir and Western Hemlock, positioning them as a strong fit for India's emerging industry. Providing a crucial counterpoint, **Anil Sethy (IWST)** presented promising findings on Indian hardwoods, revealing that tested species not only met European standards for strength but also showed that preservation treatments did not compromise their bonding, validating their potential for local mass timber production.

Driving Adoption through Technology and Environmental Value

The session also highlighted key enablers for adoption. Todd Beyreuther emphasized the role of modular construction technology as a critical method to scale up mass timber use efficiently. Finally, **Anurag Khandelwal** anchored the discussion in the core environmental motive, stressing that mass timber is essential for CO_2 reduction and can create tangible economic value through carbon credit trading, providing a compelling financial incentive for its development.

SCOPING ACTIVITIES FOR 2026 – 2027: WHAT ROLE WILL YOU PLAY?

The general discussion highlighted key strategies for moving mass timber from a niche concept to a mainstream building solution in India, focusing on expanding its appeal, building a coalition of support, and proving its value through tangible examples.

Broadening the Appeal and Application

A key point raised was the need to explore and promote the applications of mass timber beyond traditional construction. Identifying uses in interiors, furniture, industrial design, and other sectors can help diversify the market, create new demand streams, and build a broader industrial base for mass timber products.

Building a Cross-Sectoral Coalition

Participants strongly emphasized that adoption requires a concerted effort from the entire ecosystem. There is a critical need for greater involvement of key stakeholders, including consumers (to create demand), contractors and civil engineers (for practical implementation), architects (for design integration), and the hospitality sector (as a potential early adopter for sustainable projects). Educating and engaging these groups is essential to drive widespread acceptance.

Proving Value Through Demonstration

A recurring theme was the powerful role of demonstration projects. Building visible, accessible examples—such as the proposed structure at IWST—is crucial for showcasing the material's aesthetic, structural, and economic benefits. These projects serve as tangible proof-of-concept that can build confidence among skeptics, inspire professionals, and educate the public on the viability of mass timber.