Voice of FIPPI

Indian Wood & Allied Panels

Volume 20 | Issue 3 | July - September 2026 | A Quarterly Journal on Plywood and Panel Industry in India



Historic Resolution Announcing 1ST INDIA INTERNATIONAL PLYWOOD & PANEL CONGRESS (IIPPC)

2nd November 2026

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Federation of Indian Plywood & Panel Industry (FIPPI)

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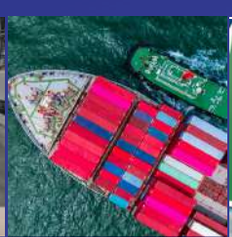









ABOUT FIPPI

The Federation of Indian Plywood & Panel Industry (FIPPI) is the apex industry body representing India's plywood, veneer, MDF, particleboard, laminates, doors, and allied wood-panel manufacturers. As the unified voice of the industry, FIPPI works closely with government institutions, research organizations, academia, and industry stakeholders to promote sustainable growth, technological advancement, quality standards, policy reforms, and agroforestrybased raw material development.

Federation of Indian Plywood & Panel Industry

ABOUT INDIA INTERNATIONAL PLYWOOD & PANEL CONGRESS

The Federation of Indian Plywood & Panel Industry (FIPPI) is pleased to announce the 1st India International Plywood & Panel Congress (IIPPC) as part of 65th Foundation Day celebration of FIPPI to be held on 2 November 2026 in New Delhi. The Congress is envisioned as a premier international platform uniting industry leaders, policymakers, researchers, and technology providers to shape the future of India's plywood and panel sector through collaborative dialogue on global opportunities and challenges.

As India emerges as one of the world's fastest-growing markets for plywood and engineered wood products, the Congress seeks to foster collaboration between industry and academia, encourage research-driven solutions, and promote sustainable manufacturing practices. The platform will facilitate the exchange of ideas that strengthen domestic manufacturing, improve resource efficiency and sustainability, accelerate technological advancement, and enhance India's global competitiveness.





CALL FOR ABSTRACTS

FIPPI invites

Original and innovative thoughts on technological advancements, sustainable solutions, industry best practices, and policy developments in strengthening India's position in the Global Plywood and Panel sector in three categories:

1. Wood Sustainability and Resource Security
2. Product Innovation & Future Opportunities
3. Strengthening India's Trade: Import Substitution & Export Promotion

The abstract must be submitted by email to info@fippi.org latest by 25th September 2026.

SESSION I

Product Innovation and Future Opportunities

In this session, the discussion will explore how India can achieve timber sustainability by 2047 amid rapidly rising demand for plywood and wood-panel products. The session will examine policy and technological initiatives to address timber scarcity through sustainable raw material strategies focused on agroforestry, Trees Outside Forests (ToF), farm-grown timber, alternative raw materials, and efficient resource utilisation. It will also highlight opportunities to enhance productivity, promote private participation in tree plantations, leverage carbon markets and green credits, and strengthen sustainability certification and traceability to build a resilient, future-ready wood resource ecosystem.

SESSION II

Product Innovation and Future Opportunities

This session will showcase emerging product innovations and technologies shaping the next generation of wood-based building materials. Discussions will cover high moisture-resistant products, OSB, sandwich boards, mass ply and other engineered wood products, along with products offering improved physical and mechanical properties, advanced and lowemission adhesives, bio-based and urea-free resin technologies, and other material innovations.

SESSION III

Strengthening India's Trade: Import Substitution & Export Promotion

This session will explore measures to reduce imports and strengthen domestic manufacturing, including Anti-Dumping Duty (ADD), Countervailing Duty (CVD), Minimum Import Price (MIP), customs valuation and other trade remedies to address unfair trade practices and ensure a level playing field. It will also focus on boosting exports through quality and standardisation, global certifications, technology upgradation, exploring new markets and trade facilitation, positioning India as a competitive global hub for wood-based products.

GUIDELINES FOR ABSTRACT SUBMISSION

The abstract should be original, concise, and limited to 750 words.

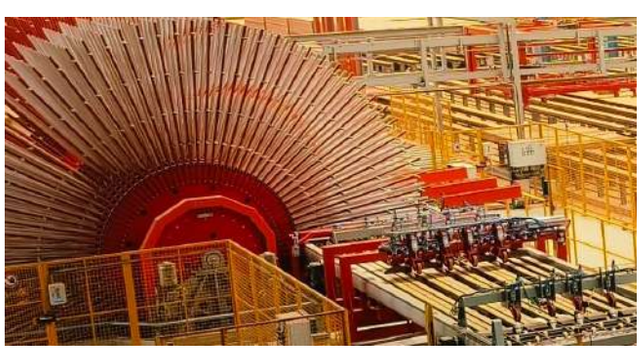
1. The font size should be 11 with a bold title and headings.
2. The theme should be mentioned at the top of the page.
3. It should include the full names of all authors along with their institutional affiliations, and the email address and phone number of the corresponding author.
4. Include 3–5 relevant keywords.
5. Briefly describe the background and objective, outline the approach/methodology adopted, and present the key findings/solutions.

PRESENTATION FORMAT

- Accepted abstracts will be presented in two parallel sessions during the Congress:

  Oral Presentation Session

  Poster Presentation Session
- The Committee will allocate accepted abstracts to either the Oral or Poster Session based on the review process.



IMPORTANT DATES

Last Date for Submission of Abstract	: 30th September 2026
Acceptance of Abstracts	: 25th September 2026
India International Plywood & Panel Congress	: 02nd November 2026

VENUE: NEW DELHI, INDIA

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43rd ANNUAL GENERAL MEETING
Federation of Indian Plywood and Panel Industry (FIPPI)
20th August 2026

The Federation of Indian Plywood and Panel Industry (FIPPI) convened its 43rd Annual General Meeting (AGM) on 20 August 2026 during MATECIA Exhibition held at Yashobhoomi Convention Centre, New Delhi. The primary objective of the meeting was to review the Federation's activities and initiatives undertaken during the preceding year, assess progress on key industry and policy matters, and deliberate on the strategic direction and action plan for the forthcoming period. The meeting was attended by office bearers, members and representatives of regional associations, who engaged in constructive discussions on issues critical to the growth, compliance, sustainability and competitiveness of the plywood and panel industry.

The meeting agenda included the Welcome Address by President, FIPPI, followed by the approval of the proceedings of the 42nd Annual General Meeting of the Federation held on 15th December 2025 which had been published in the FIPPI Magazine (January–March 2026), and were placed before the members and duly approved. The members were informed that two meetings of the FIPPI Management Committee had been convened since the last AGM, held on 20th January 2026 and 10th April 2026, respectively. The agenda further included the consideration and approval of the financial statements of FIPPI, covering the expenditure for the financial year ending March 2026 and the budget for the financial year 2026-27.

Presidential Address by Rajesh Mittal, President, FIPPI & CMD, Greenply Industries

I welcome all Patrons, Office Bearers, Managing Committee members, industry representatives, and members to the 43rd AGM of FIPPI.

At the outset, I congratulate all our members and sincerely thank everyone for their continued support and cooperation in strengthening the Federation. FIPPI has been able to accomplish a great deal for the industry with the support and cooperation of our members, regional associations and senior members. I also express my sincere appreciation to Shri N. K. Aggarwal and Shri Sajjan Bhajanka for their valuable guidance and support.

Dr. M. P. Singh will present the detailed activities and initiatives undertaken by the Federation during the past year. However, I would like to highlight a few important areas.

One of our key priorities is ensuring the availability of timber for the industry. FIPPI is actively engaging with the Government to strengthen agroforestry and promote timber plantation as a sustainable source of raw material. A significant amount of work is being undertaken in this area, as the future availability of sustainable raw material is critical for the long-term growth of our industry. I am particularly pleased to share that around five leading manufacturers have collectively undertaken plantation activities involving nearly 25 crore saplings over the past three years. This is a significant achievement and an important contribution towards strengthening the industry's future raw-material base. I request that every manufacturer—whether large, medium or small—needs to participate actively in timber plantation activities. If we want to ensure sustainable availability of timber over the long term, plantation must become a collective responsibility of the entire industry.

FIPPI is also working with IWST on a three-year project for the development and evaluation of fast-growing clones and timber varieties suitable for the plywood and panel industry, including applications in plywood and MDF. These initiatives can play an important role in strengthening our future raw-material base.





Another important area is policy advocacy on Technical Grade Urea (TGU). FIPPI is actively engaging with the Government on these issues and working towards a supportive policy framework. The industry is facing challenges arising from the increasing cost of chemicals and other inputs. In this regard, the development and adoption of bio-based resin technologies is an important area of focus. FIPPI, in collaboration with IWST, is working towards developing and promoting bio-resin technologies specifically for the plywood industry. Initial trials at DuroPly and Greenply have shown encouraging results, and several manufacturers have already started transitioning towards bio-resin systems. We should collectively work towards taking these technologies forward. There is also significant potential for developing bio-based resin technologies for MDF and particle board. International suppliers are also working in this area. With the support of IWST and other research institutions, there is considerable scope for developing suitable technologies for the Indian industry.

The Federation is facilitating international exposure and knowledge-sharing opportunities for members through trade delegations and industry visits, including Vietnam and Italy, with upcoming visits to China and New Zealand–Australia.

Before concluding, I congratulate DuroPly on completing 70 years and wish the organisation continued success in the years ahead. I also express my sincere thanks to Dr. M. P. Singh, Shri Jaydeep Chitlangia and the entire FIPPI team for their dedicated efforts in strengthening the Federation.

With these remarks, I request Dr. M. P. Singh, Director General, FIPPI, to take up the agenda and present the Follow-up Action undertaken by the Federation.

Dr. M.P. Singh, DG FIPPI thanked the President, FIPPI for the overview and presented the follow up action taken by the Federation across the key areas of its activities.

1. Enhance Membership Engagement and Improve Communication Channels

a. Membership Subscription

Dr. M. P. Singh informed the members that FIPPI currently has 55 Primary Members, 19 Affiliated Members and 6 Associate Members. He further informed that FIPPI Membership remains open under the Primary and Associate categories and encouraged efforts towards further strengthening the membership base of the Federation.

The membership subscription structure was reiterated as follows:

- Primary Members: 0.01% of the previous year's turnover, subject to a minimum annual subscription of ₹50,000.
- Associate Members: Annual subscription of ₹50,000.
- Affiliated Associations: No membership subscription.

During the discussion, it was emphasized that Primary Members should pay their annual membership subscription in accordance with the applicable turnover-based criteria. Members whose subscription, calculated at 0.01% of the previous year's turnover, exceeds the minimum



amount of ₹50,000 should pay the applicable amount. The members agreed to maintain the minimum annual membership subscription at ₹50,000.

Dr. M. P. Singh informed the members that the total membership contribution received was ₹1,45,96,448.23, while ₹2,37,288.23 was awaited from members.

Mr. Keshav Bhajanka, Vice President, FIPPI & Executive Director, Century Plyboards India Ltd. appreciated the work being undertaken by FIPPI for the benefit of the industry and emphasized the importance of members supporting FIPPI and contributing as per the prescribed membership fee structure.

b. Sub-Committee

Dr. M. P. Singh informed the members about the formation of two sub-committee groups on Products & Standards and Raw Material Sustainability to facilitate regular interaction with members, focused discussions and sharing of day-to-day developments in these areas.

Dr. Singh proposed that, if considered necessary, FIPPI could constitute a separate sub-committee on Anti-Dumping and Minimum Import Price (MIP), with members volunteering to participate. He informed about the high legal costs involved and emphasized that pursuing such measures would require industry support, financial contribution and detailed data on production, inputs and costs. Members were invited to volunteer and participate in the proposed group to deliberate on pursuing MIP and/or anti-dumping measures.

c. Strengthening FIPPI's Social Media Presence

Dr. M. P. Singh briefed the members on the active management of FIPPI's official social media accounts on LinkedIn, Facebook, Instagram, and Twitter and requested all members to follow and engage with FIPPI's social



media platforms. He also requested members to connect their social media representatives with the FIPPI team and proposed creating a common Social Media WhatsApp Group for better coordination and timely sharing of FIPPI's content. The proposal was welcomed by the members.

Shri Keshav Bhajanka, Vice President, FIPPI, emphasized the need to develop strong, relevant and meaningful content to increase engagement, reach and visibility of the Federation across social media platforms.

Dr. Singh further informed the members that the updated design of FIPPI's official website has been finalized and is live for review and feedback. Members were requested to review the website, share suggestions, wherever required, and submit testimonials for inclusion on the website to highlight their association and engagement with FIPPI.

d. Promotion of Sustainability Narrative

Dr. M. P. Singh emphasized the importance of collectively promoting a strong and consistent sustainability narrative for the wood-based panel industry. Members were requested to actively communicate the message that "Wood-based panels are the most sustainable products." Consistent communication of this message by FIPPI and its members across appropriate platforms would help strengthen awareness of the sustainability credentials of wood-based panel products and enhance the industry's positioning among relevant stakeholders.

e. Proposal for Indian Plywood & Panel Congress and FIPPI Foundation Day Celebration

Dr. M. P. Singh presented a proposal to organize the Indian Plywood & Panel Congress as part of the FIPPI Foundation Day Celebration on 2 November 2026 in New Delhi, along with the formal release of the FIPPI Coffee Table Book. He outlined the proposed Congress sessions covering wood sustainability, product innovation and future opportunities, and strengthening India's trade through import substitution and export promotion.

During the discussion, Mr. Ashok Kumar Aggarwal, Tajpuria Industries, suggested organizing the event in Uttar Pradesh. However, Mr. Jaydeep Chitlangia, Senior Vice President, FIPPI, & Mentor, Duroply Industries, suggested retaining New Delhi for organizing this Congress for better participation of Government officials and organizing a separate FIPPI workshop in Uttar Pradesh. The members agreed that the Foundation Day programme should be organized in New Delhi.

f. Advertisement Tariff for FIPPI Magazine and Coffee Table Book

Dr. M. P. Singh briefed the members about the advertisement opportunities available in FIPPI's quarterly magazine, Indian Wood & Allied Panels, and presented the applicable advertisement tariff for Primary Members as follows:

Advertisement Position	Rate
Inside Front Cover (IFC)	₹2,00,000.00
Back Cover (BC)	₹2,00,000.00
Inside Back Cover (IBC)	₹1,00,000.00
Front Pages	₹50,000.00
Back Inside Pages	₹25,000.00

Members were encouraged to support the Federation's publication through advertisements and to utilize the magazine as a platform for enhancing the visibility of their companies, products and initiatives within the industry.

Dr. M. P. Singh informed the members on the proposed FIPPI Coffee Table Book and invited member companies to contribute advertorial pages to the publication. He informed the members that the contribution rate is ₹5,00,000 per page and appreciated the contributions received and committed by member companies. Members were encouraged to participate and contribute towards the publication, which would serve as an important platform to showcase FIPPI, its members and the Indian plywood and panel industry.

2. Product Innovation and Standardization

a. Product Standardization

Dr. M. P. Singh presented the significant progress made by FIPPI in strengthening product standardization across the plywood and panel industry. FIPPI has taken up all the issues raised by the industry. He informed the members that BIS has issued a draft amendment to incorporate an optional standardized colour-coding scheme for MDF under IS 12406, enabling easier identification of different grades. He also highlighted the ongoing revision of IS 12406 to include both MDF and HDF, with HMR and BWP grades for HDF, along with a minimum density requirement of 800 kg/m^3. A draft amendment issued by BIS has been given for wide circulation. Further, the draft standards for Laminated Flooring and Flexible Plywood have been finalized, while Amendment No. 1 to IS 4990 (Shuttering Plywood) was published in August 2026.

b. Projects given to IWST

Dr. Singh briefed the General Body on the research and development projects given to the ICFRE–Institute of Wood Science and Technology (IWST). These initiatives focus on developing a Code of Practice for the effective utilization of up to 10% rejects generated during plywood and panel manufacturing, thereby promoting resource efficiency and circular economy practices. He requested regional associations to facilitate interaction with IWST and industry stakeholders to support the development of the Code of practice.

He further informed the members that work on standardisation of Prelaminated Plywood has commenced. As IWST requires a wider range of industry samples to develop the standard, particularly in the absence of an international reference standard, members manufacturing prelaminated plywood were requested to submit samples to IWST. He also proposed that a workshop can be organized with industry stakeholders on the subject. The standardisation work on Fire Retardant MDF and Particle Board is also in progress.

c. Technical Grade Urea (TGU)

Addressing the concern for technical grade urea, Dr. M. P. Singh informed the members that FIPPI is supporting the Government's objectives for the responsible and appropriate use of Technical Grade Urea (TGU) in the plywood and panel industry. However, FIPPI functions as an industry association and not as a regulatory or compliance authority and, therefore, will not undertake regulatory or enforcement functions.

He further emphasized that FIPPI is actively working to create greater awareness within the industry regarding the development and adoption of bio-resin technology as a potential alternative to reduce dependence on urea-based resins. He informed the members that the Ministry is planning to provide a project of approximately ₹10 crore to IWST for the development of bio-resin technology for the plywood industry.





Members were requested to provide their suggestions and feedback, which could be conveyed to IWST for consideration.

President, FIPPI, proposed constituting a separate committee on bio-resin, which was agreed to by the members. Mr. Ajay Kumar, Merino Industries, suggested associating Mr. Vaidyanathan, given his expertise in bio-resin technology. Dr. M. P. Singh informed the members that FIPPI, in collaboration with IWST, had organised a seminar on bio-resin technology for the plywood and panel industry on World Environment Day, wherein Mr. Vaidya was invited as a speaker. He further stated that FIPPI is making efforts to associate innovators working in this field and that the technology would be validated by IWST, with provisions for facilitating its transfer from IWST to the industry.

He further highlighted the need to address environmental clearance requirements for resin manufacturing and requested members to share any issues being faced in this regard. Shri Jaydeep Chitlangia suggested that industries manufacturing resin in-house through an integrated resin manufacturing system for captive consumption should be exempted from Environmental Clearance. The members noted and agreed with the suggestion.

3. Policy Advocacy and Institutional Reform

Dr. M. P. Singh highlighted FIPPI's policy advocacy efforts to strengthen the plywood and wood-based panel industry, including uniform implementation of the MoEF&CC Guidelines for Wood-Based Industries, Implementation of Government of India guidelines dated 2nd January 2026 to Boost Timber Supply through Private Forest Participation, and advocacy for a National Timber Policy and Agroforestry Act, National Agroforestry Board, and reconstitution of the Development Council for Plywood and Panel Products.

Dr. Singh highlighted FIPPI's initiative to promote state-level Agroforestry-Based Wood Industry Promotion Policies (AWIPPs) to strengthen the supply of farm-grown timber and support the wood-based industry. Draft policies have been submitted to Uttar Pradesh, Jharkhand, Bihar, Karnataka and West Bengal, with the objective of creating a supportive policy ecosystem for agroforestry, improving timber availability and facilitating the growth of wood-based industries in these states.

A decision was taken to promote such agroforestry-based wood industries and members were requested to promote these policies in their respective states.

4. Trade and Taxation

Dr. Singh reported that FIPPI is currently pursuing anti-dumping proceedings concerning three critical products used by the industry — Melamine, Phenol and Décor Paper. He further informed that FIPPI had recently opposed the proposed Minimum Import Price (MIP) on Melamine, highlighting the prevailing demand-supply scenario. Members suggested that similar representations may also be considered in respect of Phenol and Décor Paper, particularly as FIPPI has consistently advocated reduction in BCD on these critical raw materials rather than import restrictions.

Dr. Singh informed that, during the West Asia crisis, FIPPI had strongly advocated reduction in BCD on critical chemicals used by the industry, following which BCD on Methanol, Phenol, UF, PF, MF and Formaldehyde was reduced up to 15 July 2026.

He further informed that FIPPI had submitted a representation seeking introduction of a two-channel framework for agroforestry timber under GST, comprising RCM on purchases from unregistered and high-risk suppliers and 2 per cent GST TDS on high-value B2B transactions between registered persons, on the lines of the mechanism adopted for metal scrap. Some members informed them that they were already paying GST on timber purchased



from farmers. Dr. Singh clarified that this is not yet a formally recognized mechanism and FIPPI is pursuing the matter with the Government.

Dr. Singh also informed the members about the proposed FIPPI delegation visit to Australia and New Zealand in November, with the dual objective of exploring opportunities for sourcing raw materials from these countries and developing export opportunities for finished products.

Dr. Singh further highlighted FIPPI's continued efforts to safeguard the domestic market through its proposal for inclusion of wood panel products in the Exclusion List of future FTAs and its regular monitoring of imports of finished panel products and representations before the Government against imports without valid BIS certification. He informed that, with the recent increase in BIS licenses granted to foreign manufacturers, imports across all three segments had increased during the preceding month and warranted closer monitoring. As per FIPPI's analysis, 57 foreign manufacturers hold BIS licences for plywood, 13 for MDF and 8 for particle board, taking the total to 78 foreign manufacturers across the three product categories. The members were apprised of the country-wise distribution of these licences and the import trends observed after implementation of the QCOs.

Shri Jaydeep Chitlangia pointed out that Nepal has the highest number of BIS licenses in the plywood segment, with around 50 Nepalese manufacturers holding such licenses. He observed that, despite the concerns relating to compliance, the Government may be reluctant to take action in view of Nepal being a friendly neighbouring country. Shri Manoj Gawri highlighted the perceived gap in compliance between domestic and foreign manufacturers and informed that samples drawn from Nepalese manufacturers were still awaiting results. He suggested that the matter be taken up with FCMS and BIS. Dr. Singh requested Shri Gawri and other regional associations to submit the relevant details in writing to FIPPI so that a comprehensive representation could be made to the concerned authorities.

Dr. Singh further informed that, out of an estimated 3,000 industries, only around 1,600–1,700 manufacturers had voluntarily obtained BIS licenses and suggested greater market surveillance and sample testing for manufacturers who had not yet complied. Ms. Nikita suggested engagement of an agency to draw market samples and submitting them to BIS. Shri Akhilesh Chitlangia supported the proposal, also noting its potential to strengthen FIPPI's membership. Dr. Singh agreed to explore engagement of an agency for systematic market surveillance and sample collection.

5. Raw Material Sustainability

Dr. M. P. Singh highlighted FIPPI's initiatives to promote sustainable raw-material sourcing through agroforestry-based timber plantations. FIPPI has developed comprehensive Sustainability Guidelines for panel manufacturers to undertake timber plantations aligned with their production requirements. The members decided to refer to these as "Sustainability Guidelines" instead of "Sustainability Norms" and requested FIPPI to circulate the guidelines among all members. The guidelines were approved in principle by the members. Members were also encouraged to share their plantation initiatives through the FIPPI platform. He informed the members that the guidelines would be circulated to all FIPPI members for implementation.

He further apprised the members that the Methodology for Agroforestry-Based Carbon Credit Projects under the Offset Mechanism of the Carbon Credit Trading Scheme (Indian Carbon Market) is in its final stage. He informed the members that, once the methodology is finalized and circulated, they should collaborate with farmers in their respective catchment areas for its implementation, enabling farmers to benefit from carbon credits while promoting large-scale adoption of agroforestry.

He also informed the members about a new collaborative project with ICFRE–IWST on the Evaluation and Extension of Clones/Varieties Developed by ICFRE for the Plywood and Panel Industry. He stated that the project has commenced with the participation of five member industries, and that other interested member industries may also join the initiative, following which field trials can be undertaken in their respective catchment areas.

During the discussion, Shri Aditya Agarwal stressed that plantation initiatives have become the need of the hour and urged industries to proactively undertake large-scale plantations. He suggested that technical support from ICFRE–FRI and ICFRE–IWST should be leveraged to

implement such initiatives effectively. Supporting the suggestion, Shri Rajesh Mittal, President, FIPPI, stated that sustained plantation efforts would strengthen the industry's long-term raw material security and position India as a potential timber-exporting nation. Shri Naresh Tiwari emphasized that large-scale implementation would require active Government support. The President further proposed organizing a one-day workshop to showcase Greenply's successful plantation model so that FIPPI members could adopt similar practices effectively.

Proposal for AGROWOOD Logo

Dr. Singh also informed the members about the approval of the AGROWOOD logo exclusively for FIPPI members, aimed at promoting and recognizing sustainably sourced agroforestry-based wood and strengthening the initiative of self-certification. The members were informed that the logo would be available specifically for FIPPI members. The initiative and the logo were well appreciated by all the members.

To reinforce the industry's identity as an agroforestry-linked rather than a forest-based industry, Shri Jaydeep Chitlangia presented its implementation framework. He informed the members that AGROWOOD would be registered as FIPPI's trademark, with the Federation authorizing its use by member companies through a licensing mechanism, the commercial terms of which will be finalized in the coming months. Members will be able to use the logo on their products and marketing campaigns to strengthen the industry's agroforestry-based identity. The proposal was widely appreciated by the members.

6. Financial Statements for FY 2025–26 and Budget for F.Y. 2026-27

Dr. M. P. Singh presented a brief overview of the Financial Statement of FIPPI for the financial year ended 31 March 2026 and apprised the members of the key financial highlights.

Dr. M. P. Singh thereafter presented the proposed budget for F.Y. 2026–27 and provided a comparative overview of the expenditure and receipts for F.Y. 2025–26 and the budget estimates for F.Y. 2026–27. Based on the proposed budget, the estimated expenditure for F.Y. 2026–27 is ₹1.91 crore, against estimated receipts/income of ₹1.8193 crore, indicating an estimated budgetary shortfall of ₹10 lakh.

Dr. M. P. Singh highlighted the need to bridge the projected shortfall and emphasized the importance of strengthening the Federation's revenue through membership subscriptions, advertisements and other contributions.

The members took note of the financial position and the proposed budget for F.Y. 2026–27.

The Financial Statements of FIPPI for FY 2025–26 were placed before the members for consideration and approval and were duly approved by the members and signed by Shri Rajesh Mittal, President, FIPPI.

Conclusion

The 43rd Annual General Meeting concluded with a reaffirmation of FIPPI's commitment to strengthening the plywood and wood-based panel industry. The members expressed their support for the initiatives undertaken by FIPPI and emphasised the importance of collective industry participation in addressing key industry challenges. The meeting concluded with a vote of thanks expressing sincere gratitude to all members for their valuable participation, guidance and continued support to FIPPI.



Members' Present

1. **Shri Rajesh Mittal,** President, Federation of Indian Plywood and Panel Industry
2. **Shri Jaydeep Chitlangia,** Senior Vice President, Federation of Indian Plywood and Panel Industry
3. **Shri Keshav Bhajanka,** Vice President, Federation of Indian Plywood and Panel Industry
4. **Shri Ajay Aggarwal,** Action Tesa
5. **Km Nikita Bansal,** Century Plyboards (I) Limited
6. **Shri Sumanth Wattas,** Century Plyboards (I) Limited
7. **Shri Akhilesh Chitlangia,** Duroply Industries Limited
8. **Shri Sudeep Chitlangia,** Duroply Industries Limited
9. **Shri Abhishek Chitlangia,** Duroply Industries Limited
10. **Shri Harsh Chopra,** Metro Plywood Industries
11. **Shri Praveen Chopra,** Metro Plywood Industries
12. **Shri Padam Jain,** New Pragati Plywood Industries
13. **Shri Ravindra Chhajer,** Ambica Hydraulics Private LimitedShri Ravindra Chhajer, Ambica Hydraulics Private Limited
14. **Shri Pankaj R. Patel,** Burgeon Verticles Private Limited
15. **Shri Makhan Gattani,** Gattani IndustriesShri Makhan Gattani, Gattani Industries
16. **Shri Madhusudan Lohia,** Merino Industries Limited
17. **Shri Ajay Kumar,** Merino Industries Limited
18. **Shri Ankit Singhal,** Vidya Ply and Boards Private Limited
19. **Shri Jignesh Chowatia,** Strandply LLP
20. **Shri Naresh Goyal,** Rama Panels Private Limited
21. **Shri B.L. Sharma,** Greenlam Industries Limited
22. **Shri Yogesh Arora,** Greenlam Industries Limited
23. **Shri Ashok Kumar Agarwal,** Plywood Manufacturer Welfare Association U.P
24. **Shri Mahendra Chhalani,** M & S Ply Industries
25. **Shri Gaurav Oberoi,** Oberoi Wood Industries
26. **Shri Haresh Ajbani,** Vritti Impex Private LimitedShri Haresh Ajbani, Vritti Impex Private Limited
27. **Dr. Prasanth M.A, A.K.** Apple Ply Private Limited
28. **Shri J.K. Bihani,** Haryana Plywood Manufacturers Association
29. **Shri Rajeev Prashar,** Ply Reporter
30. **Shri Pragath Dvivedi,** Ply Reporter
31. **Shri Jagdish Ahuja,** Indian Laminate Manufacturers Association
32. **Km Khushboo,** Indian Laminate Manufacturers Association
33. **Shri Sandeep Gupta,** Northern Plywood Industries
34. **Shri Aditya Agarwal,** Northern Plywood Industries
35. **Shri Ashok Kumar Agarwal,** Tajpuria Group of Industries
36. **Shri Tilak Raj Arora,** Virgo LaminatesShri Tilak Raj Arora, Virgo Laminates
37. **Shri Ajay Garg,** E3 Group
38. **Shri Baldev Singh,** Ramneek International
39. **Shri Sadip Singh,** Golden Ply Industries
40. **Shri Wazir Sood,** Sony Industry
41. **Shri Ujjwal Bansal,** Birmi Wood Products
42. **Shri Vinay Bansal,** Birmi Wood Products
43. **Shri Rushil Thakkar,** Rushil Décor Limited
44. **Shri Umashankar Panda,** ARCL Organics Limited
45. **Shri Rahul Aggarwal,** Ganesh Plywood Industries
46. **Shri H. Vaidyanathan,** Ply Qi
47. **Shri Manoj Gwari,** Wood Technologist Association
48. **Shri Gajendra Singh,** Wood Technologist Association
49. **Shri Naresh Tiwari,** All India Plywood Manufacturers Association
50. **Shri Inderjit Singh Sohal,** Punjab Plywood Manufacturers Association
51. **Dr. M.P. Singh,** Director General, Federation of Indian Plywood and Panel Industry
52. **Shri J.K. Jain,** Senior Sustainability Advisor, Federation of Indian Plywood and Panel Industry
53. **Shri C.N. Pandey,** Senior Technical Advisor, Federation of Indian Plywood and Panel Industry
54. **Dr. Richa Bansal,** Assistant Director, Federation of Indian Plywood and Panel Industry
55. **Mr. Anthony Fernandes,** Office Secretary, Federation of Indian Plywood and Panel Industry
56. **Mr. Rishabh Gandhi,** Economic Officer, Federation of Indian Plywood and Panel Industry
57. **Mr. Abhishek Thakur,** Advocacy Officer, Federation of Indian Plywood and Panel Industry
58. **Km. Kavita Goyal,** Office Assistant, Federation of Indian Plywood and Panel Industry

Trends in Wood-based Panel Products in India towards Viksit Bharat

Augmenting Production and Efficient Utilisation of Wood Resources



The ICFRE–Institute of Wood Science & Technology (ICFRE-IWST), Bengaluru, conducted the Regional Research Conference on "Augmenting Production & Efficient Utilization of Wood Resources – A Step towards Viksit Bharat 2047" in association with ICFRE–Institute of Forest Genetics and Tree Breeding (ICFRE-IFGTB), Coimbatore, on 24 July 2026. The conference brought together researchers, industry representatives and other stakeholders to deliberate on strategies for augmenting wood production and ensuring the efficient utilisation of India's wood resources in the context of the nation's long-term development vision.

As part of the conference, Dr. M.P. Singh, Director General, Federation of Indian Plywood & Panel Industry (FIPPI), delivered a presentation on "Trends in Wood-Based Panel Products in India towards Viksit Bharat – Augmenting Production and Efficient Utilisation of Wood Resources – A Step Towards Viksit Bharat." The presentation traced the transformation of India's wood-based panel industry, highlighting its transition towards farm-grown timber, the rapid expansion of domestic manufacturing, the growing importance of agroforestry, the impact of quality regulation and the opportunities for making India a globally competitive producer of plywood and panel products.

Introduction

India's wood-based panel industry is undergoing a significant transformation. Once dependent on forest-based timber and constrained by regulatory and raw-material limitations, the sector has progressively evolved into a farmer-linked, agroforestry-driven and increasingly formalized manufacturing ecosystem creating a strong link between rural livelihoods, manufacturing, construction, furniture and sustainable economic growth. Today, the plywood and wood panel industries represent a vital component of India's manufacturing ecosystem and have the potential to contribute to the vision of Viksit Bharat 2047.

A Brief Historical Perspective

The development of India's plywood industry has been closely linked with changes in forest policy and timber availability. A major turning point came with the Supreme Court order of 1996, which imposed severe restrictions on tree felling in areas classified as forests. The resulting disruption affected wood-based industries, particularly in the Northeast, where many plywood manufacturing



Plywood and Panel Sector Contributes to the objectives of Viksit Bharat

STRENGTHS: THE INDIAN PLYWOOD AND PANEL INDUSTRY IS A FARMER-CENTRIC, PRO-RURAL, AND ENVIRONMENTALLY SUSTAINABLE

1 **Sustainable Raw Material Base**
92% of domestic timber comes from Trees Outside Forests (agroforestry), reducing import dependence.

2 **Strong MSME Ecosystem**
A largely MSME-based sector aligned with Make in India and decentralised, rural-linked growth.

3 **Employment Generation**
Employs approximately 3.5 million people across harvesting, transportation, processing, and allied activities.

4 **Benefitting Farmers**
Supporting millions of farmers, contributing to national vision of Doubling farmers' income and enhancing rural livelihoods.

5 **Most Sustainable Building Material**
A renewable, lower-embodied-carbon alternative to steel, concrete and plastics.

6 **Quality Control Orders:**
Transforming the Industry QCO implementation has led to the positive transformation and formalization of the sector.

units were forced to close or curtail operations. Plywood production decreased significantly following the order, followed by a remarkable recovery in the early 2000s. Following the setback, plywood clusters emerged in North India, and the industry subsequently began to reorganize its raw-material base, increasingly shifting from conventional forest sources towards timber grown on farms and plantations. Today, industry sources around 92% of its raw material from agroforestry and the rest 8% is met through imports.

This transition was more than a change in sourcing. It marked the beginning of a new relationship between the wood-panel industry and farmers. Plywood clusters increasingly developed around regions where plantation and agroforestry resources were available, creating a decentralized supply chain that linked farmers, timber traders, processors, manufacturers and furniture markets.

Overview of the Plywood and Wood-Panel Industry

The Indian plywood and wood-panel industry is a significant manufacturing sector comprising over 3,300 operational units, ranging from MSMEs to large, organised manufacturers. Approximately 80% of the sector remains unorganized, making MSMEs the backbone of the industry. The sector supports more than 20 lakh livelihoods, while employment across harvesting, transportation, processing and allied activities is estimated at approximately 3.5 million people. The sector has strong backward linkages with farmers through the procurement of farm-grown timber.

India's plywood and panel industry is valued at approximately more than INR 50,000 crore. The sector is witnessing strong and sustained growth across the country, driven by rapid urbanisation, rising household incomes, expanding real estate activity, organised furniture manufacturing and growing demand for modular interiors and engineered wood products. Production has expanded significantly across all major panel categories. In 2025–26, plywood production was approximately 12.7 million CBM, while MDF and particle board production stood at approximately 4.5 million CBM and 4.4 million CBM, respectively.

Within this overall growth, long-term production trends reveal distinct growth patterns across product segments. Between 2010–11 and 2025–26, plywood production grew at a CAGR of approximately 9.4%, maintaining its position as the largest segment within India's wood panel industry. MDF production expanded at a CAGR of 17.9%, supported by increasing manufacturing capacity and rising adoption in modular furniture and interior applications. Particle board production also recorded steady growth, expanding at a CAGR of 10.3%, driven by its cost competitiveness and wider application across residential and commercial interiors.

This expanding product base is supporting a much wider downstream ecosystem encompassing furniture, modular kitchens, interior fitouts, logistics, retail and construction.

Agroforestry: The Frontier of Industry-Farmer Partnerships

Agroforestry has emerged as the most important growth driver for India's plywood and wood panel industries, offering a compelling convergence of economic, environmental, and social benefits. By fostering direct linkages with farmers and landowners, industries can secure reliable and cost-effective raw material supplies while simultaneously strengthening rural economies. Agroforestry can simultaneously contribute to farm income, raw-material security, carbon sequestration and rural employment.

At its core, agroforestry significantly enhances farmer incomes compared to conventional agriculture. Numerous case studies have demonstrated its viability as a high-return land-use model, making it an increasingly attractive option for farmers across the country.

Beyond its economic advantages, agroforestry plays a critical role in advancing environmental sustainability. It contributes to increased green cover, enhances carbon sequestration, and supports India's climate commitments. Currently, around 28.4 million hectares under agroforestry sequester an estimated 60–65 million tonnes of carbon annually. Expanding this area to 53 million hectares could amplify these benefits. In fact, a 20% increase in agroforestry tree cover over the

past decade underscores its growing importance in climate mitigation and landscape restoration.

A robust agroforestry supply chain thus creates a true win–win scenario—ensuring consistent raw material availability for industries while generating livelihoods, enhancing farmer resilience, and contributing to sustainable development.

Transformation of the Plywood and Panel Industry Through QCOs

The implementation of Quality Control Orders (QCOs) has encouraged quality upgradation, enhanced consumer confidence, improved capacity utilisation, and facilitated import substitution. This has stimulated fresh investments in capacity expansion and technology upgradation, with approximately ₹3,600 crore invested during 2025–26 and a further ₹2,500 crore announced for 2026–27. Notably, new manufacturing units are being established in regions with a strong agroforestry base, further strengthening raw material linkages and regional economic development.

Overall, QCOs have not only improved quality standards but have also catalysed a broader transformation—driving competitiveness, investment, and long-term sustainability within the sector.

Challenges and Policy Gaps Affecting the Industry

1. Raw Material Constraints

Timber Scarcity and Cost

- The plywood and panel industry faces a persistent shortage of quality timber, limiting growth and competitiveness.
- This leads to higher production costs, supply chain vulnerabilities, and reduced-price competitiveness in global markets.

High Cost of Resins and Chemicals

- Dependence on imported UF, PF, MF resins and other critical chemicals increase input costs.
- Price volatility of technical-grade inputs further affects manufacturing competitiveness.

Dependence on Imported Veneers

- Industry relies on 8% timber imports due to lack of suitable domestically grown short-rotation plantation species for high-quality face veneers.
- As a result, manufacturers are entirely dependent on imported face veneers. These imports exclude reconstituted veneers.

2. Policy and Regulatory Constraints

Agroforestry Policy Gaps

- Agroforestry crops receive no government support, unlike agricultural crops.
- Agroforestry faces taxation disparity — agricultural produce is exempt from GST, while agroforestry crops are taxed at 18%.

Timber Transit and Planting Material

- Farm-grown wood is not recognized as farm produce, requiring unnecessary transit permits and causing delays.
- Fragmented state regulations raise compliance costs and disrupt raw material flow.
- Under the Indian Forest Act, timber from private farms is treated as “forest produce”, triggering restrictive controls and discouraging tree-based farming.

Implementation of Wood-Based Industries Guidelines, 2017

- Most States have not adopted the registration-based framework envisaged under the 2017 amendment for agroforestry-based wood industries.
- Continued linkage with wood availability studies delays approvals and discourages new investments.
- Uniform implementation across States is needed to unlock industry growth and encourage new investments.

3. Tax, Customs and Trade Constraints

High Duties on Raw Materials

- Basic Customs Duties (BCD) on key raw materials like wood and resins remain high — despite limited domestic availability (10% on veneers and sawn wood, 5% on logs, 7.5% on phenol and melamine, 10% on technical-grade urea)
- This increases production costs and reduces the global competitiveness and export potential of Indian manufacturers.

Low Duties on Finished Panels

- Basic Customs Duty on finished wood panels (plywood, MDF, particle board) is currently only 10%, creating competitive pressure on domestic manufacturers.
- With 80% of the sector unorganized, most units lack access to advanced technologies used by foreign producers.

Inverted Duty Structure Arising Due to India-ASEAN FTA

- Veneer sheets (HSN 4408) from non-FTA countries attract 10% duty, while finished panels (plywood, MDF, particle board) from ASEAN enter at 0% duty. This inverted duty structure makes finished imports cheaper than raw materials, discouraging domestic manufacturing.
- Urgent policy correction is needed to promote local value addition and protect Indian producers.

Opportunities for the Plywood and Wood Panel Sector

1. Export Potential: India possesses a substantial opportunity to expand its presence in global plywood and wood-panel markets. Exports of plywood and allied products reached approximately USD

The Road Ahead



1.48 billion in 2024–25, with a reported CAGR of 6.81% over the preceding decade. Major export destinations include the United States, Germany, the Netherlands, UAE, United Kingdom, France, China, Canada, Spain and Nepal. Yet India's participation in global plywood trade remains modest relative to the size of its domestic market. In 2023, plywood exports were approximately USD 61 million, accounting for only about 0.41% of the estimated USD 15 billion global plywood trade

With appropriate policy support, India can significantly enhance its global market share and position itself as a major exporter of value-added wood products. The export potential of plywood and allied products is expected to double by 2030, while simultaneously strengthening agroforestry-based rural economies, generating employment, enhancing farmer incomes, and advancing India's sustainability and climate objectives.

Threats That Need Attention

The sector must address several emerging risks. One is the possibility of green washing where products are marketed as sustainable without adequate evidence. Such practices can undermine consumer confidence and damage the credibility of genuinely sustainable wood products.

Another concern is substandard imported material. Inadequate inspection at ports can allow non-compliant products to enter the market, creating unfair competition for manufacturers that invest in standards and quality control.

Trade liberalization must also be approached carefully. Any tariff liberalization of plywood and wood panel products could adversely affect farmers' incomes, rural livelihoods and the continued adoption of agroforestry.

Agroforestry-based sourcing in India increases production costs compared to countries such as Vietnam and China where timber comes from plantations established on government-allocated or leased forest land.

Conclusion

India's plywood and wood-based panel industry can play a significant role in building an Atmanirbhar Bharat by strengthening domestic manufacturing, reducing import dependence, and creating value across the farm-to-industry value chain. With strategic policy reforms, improved access to quality timber and planting material, rationalised taxation and customs duties, and greater investment in technology and capacity, the industry can emerge as a globally competitive hub for sustainable wood products.

The industry's future can be viewed through three broad pathways—business-as-usual, growth-oriented, and transformative growth.

Panel Type	Business-as-Usual Scenario Continuation of the historical growth trajectory.	India Growth Scenario Growth aligned with India's aspiration to become a US$7.3 trillion economy by 2030–31.	Transformative Growth Scenario Policy-led industry growth.
Plywood	19.9	25.8	31.7
Particle Board (PB)	7.2	8.9	11
Medium Density Fibreboard (MDF)	10.3	9.1	11.3

India's journey towards Viksit Bharat will depend on building strong domestic value chains that generate employment, enhance manufacturing capabilities, and create globally competitive products. The wood-based panel industry is uniquely positioned to contribute to this vision. By combining agroforestry, technology, quality, sustainability and policy reform, India can move beyond being a large domestic market to becoming a global hub for high-quality, value-added wood products.

Is Recent Propaganda on Eucalyptus Cultivation Deliberate?

Its impact on Pulp and Paper, Ply and Panel Industry and Indian Agroforest Farmer.

Dr. H D Kulkarni
Former Vice President, ITC Ltd.,
PSPD, Bhadrachalam
(Chief Consultant, Sarva Bhauma Forestry & Environmental Services, Hyderabad)

Introduction

It is interesting to know that Eucalyptus, which is now accused of being negative to the environment and society was once, one of the trees highly backed by almost all the countries of the world including India. In the past, Eucalyptus was the major species for social forestry programs in India. It was promoted ever since it was brought by Tipu Sultan in 1770's and till 1980's never faced any allegation in India or elsewhere. It has captured the interest and imagination of the common man as much as it has of the conservationist, foresters, Environmental NGO's, ecologists and politicians.

Its popularity and fame brought blame and resentment as it has become important industrial tree species in the world especially for pulp and paper. Now Eucalyptus is a topic of contention, not just in India but several countries like Argentina, Brazil, Chile, China, Ethiopia, Kenya, Pakistan, Portugal, South Africa, Sri Lanka, Thailand, Uruguay and Vietnam. But none of these countries other than India (Karnataka state) has taken as harsh step as banning its cultivation.

Starting in 1980's, for more than four decades now, the criticism and debate around the cultivation of Eucalyptus has only become louder. Apart from it being a water guzzler, it got itself many other ill adjectives. Vilified as a poisonous plant and condemned as an ecological disaster, Eucalyptus has attracted opprobrium to a varying degree, and has also become the object of political propaganda. Much of the debate in earlier years has been polemic. Each group – pro or against has adduced evidence from limited experimental results. However, the current expansion rate of Eucalyptus plantations (fast wood forestry) around the world shows not all countries embarking in large scale plantations are convinced by concerns raised on Eucalyptus in India.

Genesis of the debate

The genesis of the Eucalyptus controversy dates back to 1980's when Vandana Shiva and Bandyopadhyay, J. (1987) pointed out adverse impact of Eucalyptus plantations on ecology and socio-economic aspects. The authors mentioned that rapid and large-scale expansion of Eucalyptus on farm land in arid and semi-arid regions of India has generated serious concerns about its ecological impact on vital resources like soil and water and its implication for long-term biological productivity of the land for agricultural crops as it may deprive self-sufficiency of food grains.

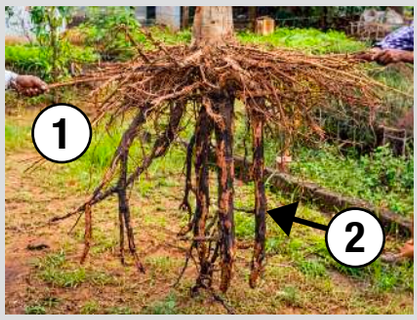
After Vandana Shiva and Bandyopadhyay, in no time other environmentalists and scientists started to report on the positive and negative effects of Eucalyptus on ecology. Most of the allegations levelled in 1980 still continue such as Eucalyptus are acidic and soil degraders and copious consumer of water. Birds and animals avoid Eucalyptus stands and there is no undergrowth (allelopathic effect). Eucalyptus plantations will cause reduction of demand for farm labour as the agricultural land is occupied for 7 to 10 years reducing annual agricultural activity leading to migration of labour to the cities for work. Eucalyptus monoculture impacts biodiversity is another allegation.

The Eucalyptus controversy became more prominent when Karnataka Pulpwood Limited (KPL) was set up by the Government of Karnataka on 14th February 1985 mainly to supply Eucalyptus to Grasim Industries unit Harihar Polyfibers, a private company. KPL was allotted 30,000 ha revenue and forest land for growing Eucalyptus plantations. A public agitation was launched from Kusnur, Dharwad District of Karnataka (known as 'Kusnur satyagraha), as villagers were perceived to be deprived of their needs of fodder, fuel and small timber and Eucalyptus monoculture will have an adverse long-term impact on the environment. The turmoil led the Supreme Court of India which issued a stay order on allotment of land to KPL and KPL was scrapped (Sadananda, 1993). This all lead to banning Eucalyptus cultivation in Karnataka to start with Forest Department and later Farm Forestry.

In response to the allegations, Poore (1987) brought out good and bad ecological effects of Eucalyptus. FAO (1988) published Eucalyptus Dilemma bringing out good and bad aspects of Eucalyptus cultivation. Further, two excellent accounts "Eucalyptus for planting" published by FAO and Eucalyptus special numbers of the "Indian Forester" (Dec 1983; Jan 1984 and Feb 1984) published by Forest Research Institute & Colleges, Dehra Dun clear up many misunderstandings about Eucalyptus. Rajan (1987) provided experimental evidence that Eucalyptus is a good water economist. Tiwari (1992) reported that about



Eucalyptus rooted cutting in Root Trainer



4-year-old Eucalyptus root system with 1-surface root and 2-anchor roots

69 mm more of the annual rain fall (infiltration) was retained by the soil under Eucalyptus plantation than under treeless areas. Ram Prasad (1988) states that the research findings and the field experiences bring out the glaring examples of misconceptions and prejudices against Eucalyptus by a section of environmentalists and India Press.

The recent R&D on clonal Eucalyptus which are fast growing, high yielding, site specific adopting 'Root Trainer Technology' revolutionized the plantation culture by making Eucalyptus farmer and environment friendly and over-come the allegations levelled against it in the past (Kulkarni, 2012; OUTREACH, 2019). The Root trainer technology helps development of multiple roots, which are surface feeders and go to a depth of 1 to 1.5 m and maximum up to 3 m only and do not affect the ground water table.

Apart from the above, sound package of practices such as wider planting, deep ploughing to allow more rain water seepage in the ground etc., are practiced by the growers under the Eucalyptus Clonal Technology method. The survival of clonal plantation is more than 90% compared to earlier seedling plantations raised by forest department (40%); The wood yield substantially increased from 6 t/ha/yr of seedling plantations to 25 t/ha/yr of clonal plantations. Thus, farmers were attracted to clonal Eucalyptus and plantations came up throughout the length and breadth of India. Clonal plantations improved the economic conditions of the farmers.



1 Year



2 Years



3 Years



4 Years

Clonal Eucalyptus root system

Clones now are being tailor-made for optimum performance on particular water up-take in relation to soil hydraulic conductivity and rooting patterns. The planting densities can be increased with increase in rainfall and computerized techniques for achieving good match between climate and species is available now. Therefore, evapotranspiration, rain fall and planting density is considered before planting Eucalyptus for effective water management. Water Use Efficiency (WUE) genotypes (hybrids) developed are the answer for water management in Eucalyptus plantations.

Ban on Eucalyptus cultivation

The epicentre of Eucalyptus controversy was located in Bangalore region of Karnataka and it widely spread to other states and countries as the criticism was widely published and circulated in the media and several national dailies. Most of the arguments were couched in ecological terms but a deeper analysis revealed that it is socio-economic in nature.

In 1980, Government of Karnataka passed a Land ceiling Act in which around 300 acres or more of land if found with tree cultivation, it is exempt from Land ceiling Act. Politicians,

infrastructure developers and other Land grabber pooled the land of the farmers and planted Eucalyptus, Bursera etc trees. The farmers sold their land which led to migration of farmers / labourers to the city causing socio-economic disturbance. People who planted Eucalyptus took advantage of the Act to protect their land. As Eucalyptus is planted to cover such land it is squarely blamed while, the actual blame is to go to the land mafia.

On the contrary, in the recent times, people who had land with Eucalyptus on the outskirt of Bangalore started blaming Eucalyptus again by levelling the age-old allegations and sought permission to free the land from Eucalyptus trees so that they can



Here is some interesting figure on water consumption and its relation to our eating habit vs Eucalyptus biomass production.

To produce 1 kg of Wheat = 506 litters of water is required

To produce 1 kg meat from Pig = 10,515 litters of water is required

To produce 1 kg Eucalyptus biomass = 785 litters of water

utilize it for housing and other business purposes as the prices of land were skyrocketing in surrounding areas of Bangalore city. It led to disappearance of Eucalyptus and new housing complexes started emerging on the outskirt of Bangalore city which is developing very fast.

Government of Karnataka completely banned Eucalyptus cultivation on 23rd February 2017 in Karnataka state both in forest and farm forestry areas. The Karnataka High Court however given a stay order as it has asked the government what improvement in ground water increase has taken place after more than two decades old ban on Eucalyptus particularly in Kolar district. There was no sound reply from the government or NGOs hence the High Court stayed the ban on cultivation of Eucalyptus.

Prior to Karnataka banning Eucalyptus cultivation, a case was filed by Safal Bharat Guru Parampara in 2014 against the Government of Punjab stating that Eucalyptus lowers ground table and is a water guzzler and is bad for the environment and the people. The National Green Tribunal (NGT) of Supreme Court passed a judgement in favour of Eucalyptus cultivation and dismissed the case. It stated that the Government of Punjab received a request from Safal Bharat Guru Parampara seeking electricity connection for 1.25 lac tube wells. The NGT directed Punjab Government to make necessary notification regarding restrictions of power supply and digging tube wells. Eucalyptus is therefore, unnecessarily blamed while the cause was tube wells and electricity connections to be used for irrigating agricultural fields. Government of Karnataka however did not consider the NGT judgement and banned Eucalyptus cultivation in the state of Karnataka!

Recent Propaganda on Eucalyptus

In the past India was dependent on foreign funds (USAID, DANIDA, CIDA, UK, Sweden, Denmark, European Union, Australia, World Bank etc.,) for forestry research and related activity. The projects (tropical pines, teak, rose wood, eucalyptus etc species) and their guidelines are mostly taken up suiting to the foreign funding agencies. These agencies had no problem at that time. Of late, most of the forestry projects are now funded by centre and state governments which has resulted in rapid progress in raising plantations and therefore, it has become an eye sore for the western countries. India has become self-sufficient on food front and is on the way to get self-sufficiency on wood front through agroforestry and this progress is not digested by western countries as they do not wish India, Indian wood-based industry (WBI) and Indian farmer to prosper! which is a direct threat to their wood-based business.

They create trade barriers (US Lacey Act, FSC, PEFC, EUDR etc.,) by asking certification for wood and wood products exported out of India. The propaganda on Eucalyptus and plantations also appears to be emanating from such quarters! Countries like China are dumping furniture and handicrafts in India as it produces products at very cheap cost and Indian WBI and the farmer cannot compete with this unscrupulous trade.

In recent times from 2025 to 2026, there is a surge of articles against Eucalyptus. The social media and the print media are used quite liberally to defame Eucalyptus. These articles start with the same title, only the country name is changed in the title. In the series, first was Sri Lanka then Latin America (Brazil, Argentina, Urugay, Chile), South Africa, Ethiopia, Tanzania and Kenya etc., and the same stuff of underground water depletion, soil degradation, grass land disappearance, less flow of water to stream etc., appears in the article. The author smells a rat and suspects that something is wrong, dishonest or not as it appears. It appears someone is doing propaganda on this issue continuously. For example, "----- country planted millions of fast-growing Eucalyptus trees to get wood but scientist now say…." Is the templet used for the article.

1. **Spain** planted millions of fast-growing Eucalyptus trees for timber, decades later scientists say many have become "green deserts" where native birds and forests life struggle to survive. (Times of India (ToI), science desk, 3-7-2026. Sanjiv Kumar has posted his views below the article – "Hmm, what a wired article! that seems there is a lobby that enforcing to out the trees and give to real estate. Words like green deserts, monoculture, ecological effect repeat).

2. **Brazil** Planted vast Eucalyptus forests for pulp 45 years later scientists found ground water had fallen by 4.5 m. ToI world desk. 7-9-2026. It is on Eucalyptus plantations and ground water debate. (https://timesofIndia.Indiatimes.com/world/rest-of-world/

brazil-planted-vast- eucalypyus-forests-for-pulp-45-years-later-scientists-found-groundwater-had-fallen-by-4-5-meters/articleshow/133865221.cms).

2.1. **Eucalyptus** for Brazil's steelmaking dries out communities in Minas Gerais. D.C.E. Picaud and Simone Fant 28-4-2025. Brazil. (https://news.mongabay.com/2025/04/eucalytpus-for-brazils-steelmaking-dries-out-communities-in-minas-gerais/). Same age-old story of mono-culture, ecological damage etc., reported.

2.2. **'Green deserts':** the farmers winning a battle with Brazil's wood-pulp giant. (Open Society Foundations. Sara Van Horn in Eunapolis, Brazil. I Global Development I The Guardian I https://share.google/uvOKvwl1CodGx3Ad). This is about the land dispute / land grab issue.

Response to the above 2 articles: Our company subsidiary is operating mills in Bahia. It has two distinct areas of dry areas and wet areas. Problem may be in dry areas even plantations die due to shortage of water and less rain. This paper is a simpler view of one location and do not consider the climate change effect in the following years. Eucalyptus needs to be carefully planted in low rain fall areas like this one. The writing group is very political too and the eucalyptus used for charcoal and not for pulp (personal communication).

3. **Sri Lanka** in the 1930s planted millions of fast-growing Eucalyptus trees to restore degraded highlands but scientists now say that plantations dry out mountain soil, reduce water flowing into streams and lead to low-diversity monocultures. (TOI Science Desk/ Times of India.com/ 6-7-2026). Article despite criticisms, researchers emphasise that Eucalyptus still play an important role in Sri Lankas economy by supplying timber and reduce pressure on natural forests but its planting in degraded highlands creates environmental impact especially on water flow to steam etc. With modern forest management techniques such problems can be overcome.

4). **Uruguay** planted Eucalyptus and Pine forests across grasslands: 20 years later scientists found rivers were carrying much less water. (TOI. Times of India World Desk. Times of India.com 7-9-2026).

5). **Eucalyptus** tree effect not only in India but in the entire world and has become a headache and its adverse effects are seen in Latin America and Africa. (Navbharat Times. Science Desk. 8-9-2026. https://navbharattimes.indiatimes.com/world/science-news/eucalyptus-plantation-bad-effect-on-soil-and-groundwater-study-in-latin-america-and-africa-reveals/articleshow/133912687.cms). Brazil is becoming green desert. In Argentina water level is falling in ground water resource. In Urugay, 20 years study grass lands have disappeared. Rwanda has biggest Eucalyptus plantation and soil is degraded along with reduction of ground water table. The title is changed but the matter remains the same.

6. **Eucalyptus** is a false promise that threatens Indias grasslands. S P Sashidhar, ATREE, 22-3-2025. Down to Earth. (Down to Earth writes in the foot note that views reflected are that of authors own and do not necessarily reflect that of Down to Earth). The author is not discussing significant increase in water table in Kolar region rather put up recycled the age-old perceptions on Eucalyptus in his article (personal communication by one of the industries persons in Karnataka).

Impact of propaganda on Indian WBI and farmer

The pulp and paper and plywood and panel industry derive its wood mainly from agroforestry plantations to a tune of 400 lac tonnes/year. Out of the 400 lac tonnes, approximately 40% (160 lac tonnes) of this wood is Eucalyptus and is produced by the farmers from the agroforestry plantations and not from the forest lands. While, rest of the wood of 60% (240 lac tonnes) is derived from Poplars, Casuarina, Subabul, Acacia, Malbar Neem, Mango and other miscellaneous wood species grown under agroforestry for which there is no such rabid propaganda unlike Eucalyptus. For 160 lac tonnes Eucalyptus wood, the estimated wood asset value works out to Rs. 9600 cr./yr (@ Rs.6000/t) approximately. This wood asset value will get affected if the false propaganda continues and hence, is the caution as it deals with the lively hood of approximately 80,000 farmers per year (estimated @ 40 t/acre and 5 acres/farmer). The 'short wood forestry', with a felling cycle of 2 to 4 years is mainly practiced by the farmer for Eucalyptus and it is grown in agricultural land like any other agriculture crop. If the people fall for this false propaganda, then the wood production and farmers income get adversely affected and in turn the WBI will also suffer. Therefore, all efforts should be made by the WBI, farmers and the government agencies to build a positive image of Eucalyptus cultivation in India. However, Eucalyptus clonal technology innovation has brought in a good number of positive changes to overcome the socio-economic and environmental negative impacts which are highlighted by few scientists and propagandists.

Countering the propaganda

The increase in demand for timber and global Eucalyptus cultivation has generated interest and in both pro and against groups. In earlier days how Brazil has over come the propaganda against Eucalyptus is worth here to mention.

The Author A. N. Chaturvedi, retired Additional Chief Conservator of Forests and Head of the Forest Research, Uttar Pradesh Forest Department, in his book "Memoirs Of A Forester" published in 2001 described how Brazil

has countered the propaganda and the same is reproduced here from page no. 69 and 70.

"Planting of Eucalyptus trees was vociferously opposed by a group of persons who called themselves environmentalists. Many publications were produced often in the form of attractive pamphlets. Spaces were bought in Newspapers, warning farmers against planting Eucalyptus trees. Politicians and bureaucrats soon fell under the spell of this propaganda. I saw one publication that was funded by Japanese organization, though written by Sri J. Bandyopadhyay, an Indian engineer. This publication gave unfounded arguments that the planting of Eucalyptus would dry up soil, destroy the micro-flora, reduce grain yields and cause overall harm to the environment. I was surprised how these persons were able to get funds for this propaganda at such a large scale. I got an answer when I visited Brazil in 1987. Brazil started Eucalyptus clonal plantations that tripled the yields of pulpwood. Japanese paper makers in the meantime perfected technologies of making quality paper with pure Eucalyptus wood. These two developments brought about significant changes in the global paper industry. Canada and Sweden, which dominated the global paper market, got worried. These industries joined in a sustained effort to somehow reduce the pace of planting of Eucalyptus.

I asked an English-speaking manager of Aracruz, the world's largest producer of Eucalyptus pulp, as to how they tackled the propaganda that may have been unleashed as in India. He said that several persons in Brazil started a publicity campaign against planting of Eucalyptus, giving unfounded arguments. The paper industries joined together and employed two detective agencies that worked at a global level. These agencies were required to find out the source of funding of these 'hate Eucalyptus' campaigners. The agencies provided authentic data about the so-called Brazilians environmentalists, that received funds and the industries that gave these funds. The channels, through which these funds were routed, were also indicated. The pulp industries bought space in local papers, and other information medium, and widely publicized this information and dubbed these persons as enemies of Brazil. These persons were hounded out of Brazil by strong public opinion".

In the final analysis 'there can be no simple answer for Eucalyptus is a curse or a cure'. Eucalyptus as a plant need not be blamed as it is a natures product. What is to be blamed is the mis-management of this species ignoring its scientific management as Eucalyptus has its own place and cannot be thrust everywhere and anywhere. However, the propaganda against its cultivation in social media and print media needs to be countered with the same vigour bringing in the positive aspects of Eucalyptus cultivation which immensely contribute to socio-economic and environmental gains helping WBI and the farmer to become not only 'Atmanirbhar' but also compete globally for wood and wood products. Two such articles appeared in the social and print media recently and the same is being quoted here.

1). Benefits of Eucalyptus plantations, ecological services, socio-economic contributions and innovation - A global review (https://www.mdpl.com/1999-4907/17/6/644, 25-5-2026.

P. Mensah, A.S. Pimenta, R.R. de Melo, J. Ammponsah, E. Rusch, H. Danso, N de O Medeiros and G. S. P. Gama. MDPL. Forests. Brings out the economic, environmental and societal contributions from Eucalyptus plantations globally.

2). Indias rice cultivation drinks too much water. IIT, Madras has a fix, says Director Kamakoti. India Today. 20-9-2026.

Always Eucalyptus is blamed for water consumption now rice is also blamed!

Conclusion

Due to the rising contention amongst the various groups, development in the particular sector should not halt as it could be a factor of losing growth opportunity for the ones who rely on this segment dearly, including the industry, farmers, forests and the workforce. This propaganda is to be countered by using social media and print media by the concerned people in India effectively.

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Wood Panel Imports Pick Up: What Lies Behind the Recent Upswing?

Rishabh Gandhi
Economic Officer, FIPPI

1. The Post-QCO Import Landscape

India's wood panel import landscape has undergone significant changes in recent years, particularly following the implementation of the Quality Control Orders (QCOs) for wood-based panel products in February 2025. Prior to the QCOs, combined imports of plywood, MDF and particle board reached a high of ₹482 crore in January 2025, reflecting the significant scale of imports into the Indian market.

With the QCOs coming into effect, covered imports were brought under a mandatory BIS certification framework, requiring compliance with the applicable Indian Standards and sourcing from foreign manufacturing units holding valid BIS licences. Imports subsequently declined sharply from the pre-QCO levels and, from April 2025 to May 2026, remained within a relatively narrow range of ₹65–100 crore per month.

However, in recent months, the import landscape has witnessed a sharp uptick in imports of wood panel products, marking a clear departure from the subdued trend observed after the QCOs. The present analysis seeks to examine this recent increase and identify the key factors driving the uptick in imports.

2. The Recent Upswing in Wood Panel Imports

2.1 From Subdued Imports to a Recent Upswing

Immediately following the implementation of the QCOs, wood panel imports declined sharply and remained at relatively subdued levels for most of the subsequent period. This trend changed in recent months,

Figure 1: Historical Trend in India's Wood Panel Imports (in ₹ cr)

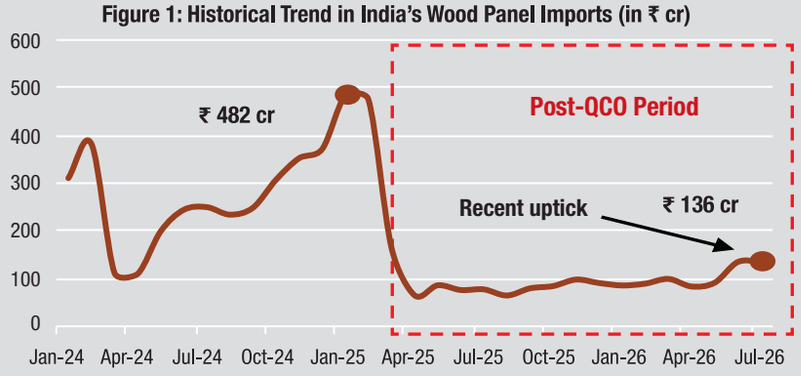
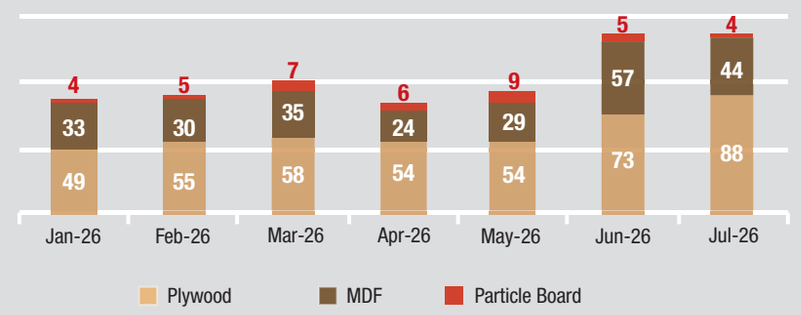


Figure 2: Segment-wise Recent Import Trends (in ₹ cr)



with monthly imports rising to ₹135 crore in June 2026 and ₹136 crore in July 2026. The increase represents a clear upswing from the subdued levels observed during the preceding months.

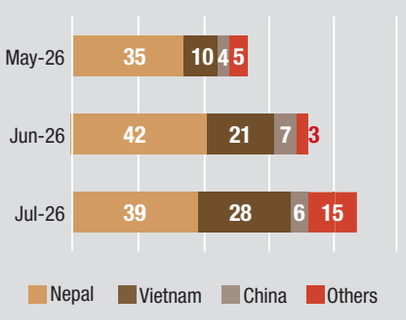
The recent upswing has been driven entirely by plywood and MDF. Plywood imports increased from ₹54 crore in May to ₹88 crore in July 2026, while MDF imports rose from ₹29 crore to ₹44 crore over the same period. In contrast, particle board imports remained low and broadly unchanged, making no material contribution to the increase. The recent rise in wood panel imports is therefore concentrated in plywood and MDF, with plywood recording the larger increase.

2.2 Tracing the Sources of Recent Imports

2.2.1 Plywood

The recent upswing in wood panel imports was driven primarily by the sharp increase in plywood imports, which, in turn, was led by a substantial rise in imports from Vietnam. Imports from Vietnam more than doubled in just three months, increasing from ₹10 crore in May to ₹28 crore in July 2026. Nepal remained the largest source of plywood imports, with imports rising from ₹35 crore in May to ₹42 crore in June before moderating to ₹39 crore in July. In contrast, imports from China remained broadly stable at ₹4–7 crore during the period.

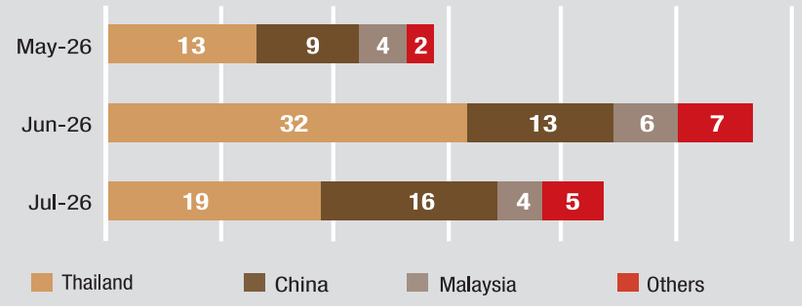
Figure 3: Source Country-wise India's Plywood Imports (in ₹ cr)



Thus, while Nepal continued to be the largest individual source, Vietnam emerged as the principal contributor to the recent increase in plywood imports.

2.2.2 MDF

Figure 4: Source Country-wise India's MDF Imports (in ₹ cr)



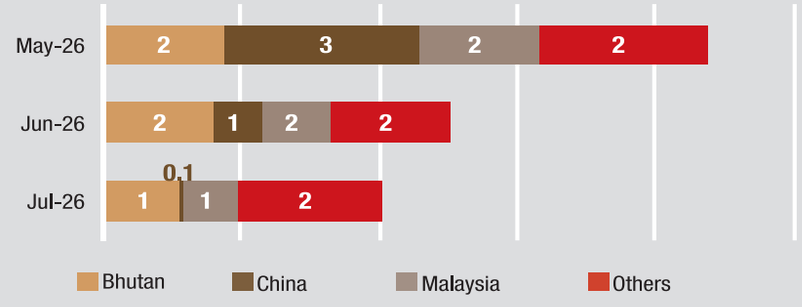
The recent upswing in wood panel imports was also supported by a sharp increase in MDF imports, particularly during June 2026. Thailand emerged as the key source behind this increase, with imports more than doubling from ₹13 crore in May to ₹32 crore in June. Imports from China followed a steadier upward trajectory, rising from ₹9 crore in May to ₹13 crore in June and further to ₹16 crore in July. Moreover, imports from Malaysia remained relatively stable within a narrow range of ₹4–6 crore during the period.

Thus, the June surge in MDF imports was primarily Thailand-led, while China recorded a sustained increase through July.

2.2.3 Particle Board

Unlike plywood and MDF, particle board imports declined during the recent period and therefore did not contribute to the recent surge in wood panel imports. The source composition of particle board imports was also more dispersed across several countries, compared with plywood and MDF, where imports were concentrated among a smaller number of major source countries. Bhutan was the largest source over the May–July period, accounting for ₹5 crore of imports, followed by China and Malaysia at ₹4 crore each.

Figure 5: Source Country-wise India's Particle Board Imports (in ₹ cr)



3. The Expanding Foreign BIS-Certified Supply Base

3.1 Growth in Foreign BIS-Certified Manufacturers

The trend in the number of foreign manufacturers holding BIS licences provides an important indication of the evolving import landscape following the implementation of the QCOs. The foreign BIS-certified manufacturing base across all three wood panel segments has expanded significantly, with the combined number of manufacturers increasing from 11 in June 2025 to 79 in September 2026. Plywood accounted for the largest expansion, with the number of certified foreign manufacturers rising from 9 to 58, while the certified base for MDF increased from 2 to 13 and particle

Table 1: Number of Foreign Manufacturers Holding BIS Licences by Product Segment

As on	Plywood	MDF	Particle Board	Total Across Segments
Jun-25	9	2	0	11
Sep-25	9	2	0	11
Dec-25	16	2	1	19
Mar-26	41	11	6	58
Jun-26	55	13	6	74
Sep-26	58	13	8	79

Figure 6: Number of Foreign Manufacturers with BIS Licences for Plywood, by Country

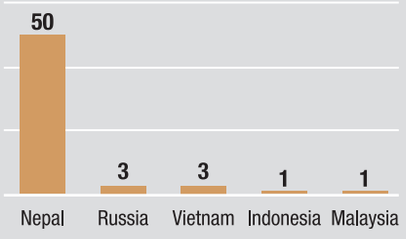


Figure 6: Number of Foreign Manufacturers with BIS Licences for MDF, by Country

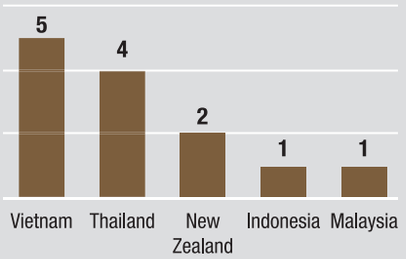
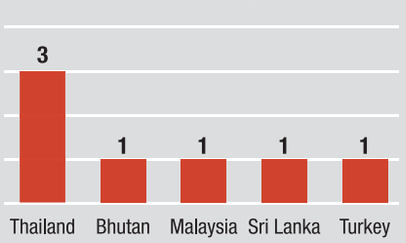


Figure 6: Number of Foreign Manufacturers with BIS Licences for Particle Board, by Country



board from none to 8 over the same period.

The expansion became particularly pronounced from early 2026, with the combined number of manufacturers more than tripling from 19 in December 2025 to 58 in March 2026, before increasing further to 74 in June and 79 in September. The widening foreign BIS-certified base has expanded the pool of overseas manufacturing units eligible to supply the Indian market, making it an important factor behind the recent upswing in wood panel imports.

3.2 Country-wise Distribution of Foreign BIS-Certified Manufacturer

The country-wise distribution of foreign BIS-certified manufacturers reveals distinct patterns across the three wood panel segments. Plywood has the largest foreign BIS-certified base, with 58 manufacturers, of which 50 are based in Nepal, indicating a high concentration of the plywood-certified manufacturing base in Nepal. The remaining certified manufacturers are spread across Vietnam, Russia, Indonesia and Malaysia.

In contrast, the MDF segment has a relatively more diversified country-wise distribution, with Vietnam and Thailand accounting for 5 and 4 foreign BIS-certified manufacturers, respectively. The remaining manufacturers are based in New Zealand, Indonesia and Malaysia. Moreover, the particle board segment has the most geographically dispersed certified manufacturing base, with Thailand accounting for the largest number at 3 manufacturers, while Bhutan, Malaysia, Nepal, Sri Lanka and Turkey account for one manufacturer each.

Overall, the expansion of the foreign BIS-certified manufacturing base across multiple countries has significantly widened the pool of overseas manufacturers eligible to supply the Indian market, providing a key link to the recent sharp increase in wood panel imports.

4. Comparing BIS-Certified Supply with Recent Import Flows

The comparison of the BIS-certified supply base with recent import flows brings out several important features of the evolving import landscape. First, the size of the foreign BIS-certified manufacturing base does not necessarily correspond to the magnitude of a country's contribution to the recent uptick in India's wood panel imports. Similarly, the presence of BIS-certified manufacturers in a country does not necessarily translate into a persistent month-on-month increase in imports from that source.

More importantly, however, the case of China raises a serious concern. Imports of MDF from China increased steadily from ₹9 crore in May to ₹13 crore in June and further to ₹16 crore in July 2026, despite no Chinese manufacturer appearing in the BIS-certified manufacturing base for MDF as of September 2026. This divergence raises a serious compliance concern and warrants closer examination of the manner in which such imports are entering the Indian market despite the absence of a corresponding Chinese BIS-certified manufacturing base.

Table 2: Mapping Key Sources of the Recent Import Uptick Against Their BIS-Certified Manufacturing Base

Product Segment	Key Source Country	Incremental Change: May-Jun 2026 (₹ cr)	Incremental Change: Jun–Jul 2026 (₹ cr)	BIS Licenses (Sep-26)	Key Takeaway
Plywood	Nepal	+7	-3	50	Largest pool of BIS-certified manufacturing base.
Plywood	Vietnam	+11	+7	3	Primary engine of recent plywood import expansion.
MDF	Thailand	+19	-13	4	One-time June clearance spike that normalized in July.
MDF	China	+4	+3	0	Compliance Red Flag: Continuous growth with zero license.

5. Looking Ahead: An Evolving Import Landscape

The recent import uptick indicates a clear shift in India's wood panel import landscape from the subdued levels observed following the implementation of the QCOs to a renewed upswing. This shift has coincided with a rapid expansion of the foreign BIS-certified manufacturing base, widening the pool of overseas manufacturers eligible to supply the Indian market. At the same time, the analysis highlights that, more than a year after the QCOs came into effect, imports continue to enter from sources without a corresponding BIS-certified manufacturing base, raising serious questions regarding compliance with the certification requirements.

Going forward, continued monitoring of the foreign BIS-certified manufacturing base alongside actual import flows will therefore be critical. Regular mapping of country-wise imports with the corresponding BIS certification status can help identify emerging supply patterns, flag potential compliance concerns and support more effective implementation of the QCO framework. ■

SOURCES:

- DGCI&S, Ministry of Commerce and Industry — Import data for HS Codes 4412, 4411 and 4410
- Bureau of Indian Standards (BIS) — Foreign Manufacturers Certification Scheme (FMCS) Licensee Database

Growing India's Industrial Wood Base: Industry–Farmer Partnerships for an Atmanirbhar Plywood and Panel Sector



R. K. Sapra
Former Managing Director
Haryana Forest Development Corporation

1. Introduction

India's plywood and panel industry is emerging as an important component of the country's rapidly expanding wood-based manufacturing sector, driven by increasing demand from housing, infrastructure, furniture and interior applications. However, the future growth and competitiveness of the industry will depend critically on the availability of adequate, affordable and sustainable supplies of industrial wood. According to the Federation of Indian Plywood and Panel Industry (FIPPI), the plywood sector remains highly fragmented, with nearly 80% of production accounted for by the unorganised sector and only about 20% by the organised sector. The industry comprises around 3,132 units and provides direct employment to more than 10 lakh people, while major organised players include CenturyPly, Greenpanel, Rushil Décor, Duroply and Merino. The ICFRE has projected the demand for plywood and related wood-based products at about 700 lakh cubic metres in round wood equivalent (RWE). In addition, India has about 47 particle board and 12 medium-density fibreboard (MDF) manufacturing units, which together consume about 90 lakh cubic metres of wood (RWE). With the expansion of manufacturing capacity and rising demand for wood-based products, ensuring a reliable long-term supply of industrial wood has become a strategic challenge for the sector. High domestic wood prices and inadequate availability of suitable raw material have already resulted in increasing dependence on imports of pine, poplar, eucalyptus, veneers and other wood products. While imports can help meet short-term supply gaps, they cannot provide a sustainable long-term solution. The central challenge, therefore, is to substantially increase domestic production of industrial wood, particularly through agroforestry and by developing long-term partnerships among farmers, industry and government.

2. Imports Do not Solve the Problem

Imports can serve as a useful buffer to meet temporary shortfalls in domestic wood availability, but they should not become the structural foundation of India's plywood and panel industry. Whenever domestic prices rise, importing veneer, logs and wood panels may appear to be the easiest solution. However, excessive dependence on imports exposes the industry to exchange-rate fluctuations, rising freight costs, volatility in international timber prices, geopolitical disruptions, port congestion and emerging carbon-related trade barriers.

More importantly, imported wood does not generate the broad rural economic multiplier that can be created through agroforestry. Every cubic metre of wood produced domestically generates economic activity and income across an extended value chain: farmer farm labour harvesting contractor transporter trader processor panel industry. A sustained expansion of domestic wood production, therefore, would not only improve the availability and price stability of raw material for the industry but also create rural employment, diversify and enhance farm incomes, strengthen local value chains and reduce India's dependence on imported wood and wood products.

3. Increasing the Production of Industrial Wood

3.1 Past Experiences of Wood-based Industry

India already has successful examples of addressing raw-material shortages through integrated models linking agroforestry with wood-based industry. WIMCO pioneered the promotion of poplar-based agroforestry in 1984 by supplying quality plants, facilitating access to institutional finance, developing packages of practices and offering buy-back arrangements. Similarly, ITC Bhadrachalam Ltd. promoted the cultivation of clonal eucalyptus, casuarina and subabul since 1989. Its initiatives in the development of quality plants, along with technical support, encouraged the widespread adoption of clonal eucalyptus in different parts of the country. These experiences clearly demonstrate that integrated models can significantly increase the production of industrial wood. Such

industry–farmer partnerships are, therefore, essential for ensuring the long-term sustainability and raw-material security of the wood-based industry.

3.2 Present Efforts of Plywood and Panel Industry

Several leading companies including CenturyPly, Greenply, Rushil Décor, have already initiated programmes to support farmers and promote agroforestry. These initiatives include the supply of subsidised clonal plants, technical advice, extension support, delivery of plants and assistance in the procurement of timber. In some cases, companies have also provided price assurance mechanisms to reduce market risks for farmers. These initiatives demonstrate that well-designed farmer–industry partnerships can help in increasing the production of industrial wood.

A significant step in this direction has recently been taken by the FIPPI, which has signed a MOU with the Indian Council of Forestry Research and Education (ICFRE) for a project "Evaluation and Extension of Clones/ Varieties Developed by ICFRE for the Plywood and Panel Industry." This initiative aims to evaluate suitable high-yielding clones and varieties and facilitate their large-scale extension to farmers. Such collaborative efforts can play an important role in strengthening the long-term sustainability and raw-material security of India's plywood and panel industry.

4. Initiatives Required

4.1 Plywood and Panel Industry

Every large company should move from procurement to "Wood-supply Development Plan". The companies should become partners in creating their own future raw-material base. They should prepare a 10–15-year Wood Security Plan. Following actions need to be taken by them.

i. Long-term Contracts with Farmers

Every major company should adopt 10,000–50,000 farmers and should have wood supply agreements.; instead of merely approaching farmers when trees are ready for harvesting, major companies should provide planting material; technical advice; harvesting services; transport; and an assured market. This is much more powerful than simply giving a subsidy for plantation.

ii. "Wood Baskets" Around Clusters of Wood-based Industries

Around every major plywood and panel industry cluster, the industry should develop a "Wood Basket" within a radius of 100–150 km, where industrial agroforestry is systematically promoted. This approach would enable investors to address a critical question before establishing manufacturing facility: "Where will the required wood come from over the next 20 years?" The availability of a sustainable raw-material supply should, therefore, be made a key prerequisite for approving new capacity or expanding existing plywood and panel manufacturing facilities.

iii. Captive Plantations

Large plywood and panel companies should consider establishing "Captive Wood



Plantations" on degraded private land; leased land; community land; and farm partnerships. However, the existing productive agricultural land should not be diverted indiscriminately. The emphasis should be on additional wood production, not competition with food production.

iv. Wood Development Fund

The Plywood and Panel Industry is mainly concentrated in the unorganised sector; hence small units can not directly support the farmers. Hence, FIPPI should motivate the industry through plywood associations to create a fund through a small contribution from every cubic metre of plywood produced which may finance R&D; extension services; and plantation development.

v. Tree Income Parity

The plywood and panel industry needs to ensure that the income from tree crops should be in top three alternatives of farm crops through price adjustment of industrial wood for maintaining the interest of farmers in tree farming.

vi. Tree Transition Incentive:

India has 86% of farmers in marginal and small categories, hence the large companies may promote agroforestry among them through raising block plantations in their farmlands from CSR funds. The income from tree plantations may be shared between farmers and panchayat in the ratio of 60:40. The panchayats may use this fund for the carrying out development works in their villages.

4.2 Government

The Government of India has launched the Aatmanirbhar Bharat Abhiyan to reduce import dependency of industrial wood and wood products. To promote self-reliance in this sector, the following policy initiatives are required.

i. Constitute a National Agroforestry Development Board

India needs an institution whose primary mandate is 'produce more wood outside forests'. The objective should be to move from the present approach to a national wood-production strategy. The Government's own National Agroforestry Policy-2014 recognised the need for coordinated action involving government and private industry, hence National Agroforestry Development Board may be created by the Ministry of Agriculture and Farmer Welfare.

ii. Encourage Large Plywood & Panel Units

The Government may extend the benefits of the Production Linked Incentive (PLI) Scheme to encourage the establishment of large plywood and panel units, which will develop long term partnership with farmers for the promotion of production of industrial wood.

iii. Revise the EXIM Policy

The Government should support the goals of Aatmanirbharta in wood and wood products by promoting its local production and revising the EXIM Policy accordingly.

iv. Parity with Agricultural Crops

The Government should provide tree crops parity by extending the institutional support and facilities available to conventional agricultural crops. These should include easy and affordable credit, crop insurance, price-deficiency support schemes such as the Bhavantar Bharpai Yojana, access to e-NAM and other digital marketing platforms, and other appropriate risk-mitigation and market-support mechanisms.

v. Payment for Carbon Sequestration and Ecosystem Services

The Government should develop institutional mechanism for providing incentives to farmers for their contribution in providing Carbon Sequestration and Ecosystem Services.

5. Conclusion

India's plywood and panel industry is at a critical juncture, with the availability of affordable and sustainable industrial wood emerging as the major constraint to future growth. Since the bulk of India's industrial wood already comes from agroforestry, expanding and strengthening farmer-based tree cultivation must become a national priority. The successful experiences of WIMCO and ITC Bhadrachalam demonstrate that strong industry–farmer partnerships, can create reliable raw-material supplies. The Government should provide tree crops parity with agricultural crops in providing incentives, while simplifying harvesting and transit regulations. The plywood and panel industry, through FIPPI and individual companies, should move from a procurement-oriented approach to a proactive farmer-partnership model. A coordinated national programme involving Government, industry and farmers is therefore essential to substantially increase domestic wood production, reduce dependence on imports, improve farm incomes and ensure long-term raw-material security. Industrial wood security should be treated not merely as an industry requirement, but as a strategic national priority for achieving Atmanirbhar Bharat.

Traceability and System Integrity of Forest-based Supply Chains: FSC Solutions



Dr. Suresh Gairola
FSC India Country Director

1. Importance of Traceability and System Integrity

Traceability and system integrity in forest-based supply chains is fundamental to ensuring that wood, paper, and non-timber forest products originate from legally harvested and sustainably managed forests. At its core, a traceable supply chain allows every actor—from natural forest and tree plantation owners and producers to end consumers—to track the journey from its exact point of harvest through processing, transport, and final sale. Maintaining high system integrity across this chain prevents illegally harvested timber from being adulterated into legitimate commercial streams, directly curbing illegal logging, primary forest degradation, and biodiversity loss.

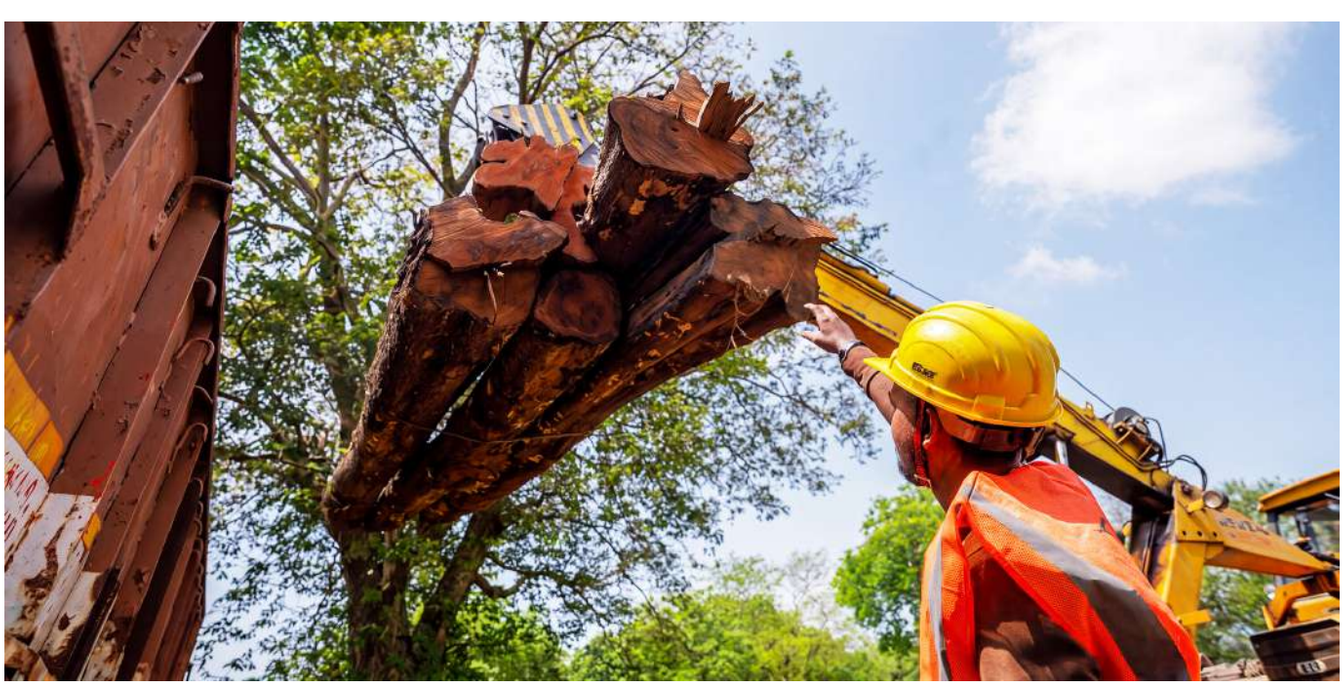
From a regulatory and export standpoint, major global consumer markets enforce strict due diligence laws, such as the EU Deforestation Regulation (EUDR), the US Lacey Act, and Australia's Illegal Logging Prohibition Act. These frameworks require verifiable geolocation data and precise species identification before products can cross borders. Without robust, tamper-proof tracking mechanisms, companies risk severe financial penalties, product seizures, and total exclusion from key markets. System integrity verifies that harvesting permissions, volume quotas, and export permits match actual physical shipments, closing loopholes that fraudsters exploit.

Traceability guarantees that forest operations honor basic human rights and fair labour practices. It verifies that timber was harvested with the Free, Prior, and Informed Consent (FPIC) of local communities whose lands are affected by logging. Ensuring system integrity ensures that safety standards are met, labour violations are documented, and fair wages are distributed, creating an equitable economic framework alongside environmental protection.

Supply chain integrity underpins commercial value and consumer trust. Voluntary certification schemes like the Forest Stewardship Council (FSC) rely entirely on verified chain-of-custody protocols to issue eco-labels. Digital innovations, including RFID tagging, stable isotope testing, DNA verification, and distributed ledgers, ensure that green claims are scientifically grounded rather than corporate greenwashing.

2. Indian Scenario

In India, the position surrounding forest-based supply chain integrity and



traceability presents a mix of stringent domestic regulations, emerging digital interventions, and significant structural challenges.

(a) Regulatory Framework and the Transit Pass System: India's timber and forest product tracking historically relies on the Transit Pass (TP) system under state-level forest rules and the Indian Forest Act. To move timber legally, producers and traders must secure permits verifying that the wood was felled with official approval from state forest departments. To streamline this process nationally, India launched the National Transit Pass System (NTPS), a unified digital portal that replaces state-specific paper permits with electronic transit passes (e-TPs) to enable seamless, traceable inter-state transport of forest produce. Certain exempted species grown on private lands in different states do not require a formal Transit Permit (TP) from the Forest Department for harvesting and transportation.

(b) High Export Exposure and Compliance Pressures: India is a major exporter of processed wood products, paper, and handicrafts. International regulations require strict geolocation data for raw materials to prove they do not originate from deforested land. Indian manufacturers relying on wood sourced from domestic forests or imported timber must maintain transparent chain-of-custody documentation to protect export market access to major markets.

(c) BRSR (Business Responsibility and Sustainability Reporting): Mandated by the Securities and Exchange Board of India (SEBI) for the top 1,000 listed companies, it acts as a powerful driver for transparency and traceable forest supply chains. As corporate India shifts from basic ESG commitments to measurable disclosures, forest-dependent sectors like paper and pulp, FMCG packaging, wood, furniture, and real estate are forced to scrutinize how raw wood products are harvested and processed. The scope of BRSR is expected to grow exponentially in the future.

(d) Mandatory Environmental Disclosures Under National Principles: BRSR is structured around the National Guidelines on Responsible Business Conduct (NGRBC). Under Principle 2 *(Businesses should provide goods and services in a manner that is sustainable and safe)* and Principle 6 *(Businesses should respect and make efforts to protect and restore the environment)*, companies must disclose the proportion of their raw material inputs that are sustainably sourced. For wood and other forest products, this directly incentivizes companies to mandate certified Chain of Custody (CoC) standards, such as FSC, from their forest suppliers to verify that forest products do not originate from illegal felling or high-conservation-value areas.

(e) Value Chain Mandates and Scope 3 Emissions: Through the BRSR Core framework, SEBI has extended sustainability disclosures beyond corporate headquarters to cover a company's broader value chain—focusing on significant upstream suppliers and downstream partners. Because Scope 3 emissions (indirect value-chain greenhouse gas emissions) include land-use change, deforestation, and raw material transport, forest product companies must track wood back to farm-gate or forest depot origins. This regulatory ripple effect forces tier-1 wood suppliers, sawmills, and agricultural farmers in Trees Outside Forests (TOF) networks to adopt digital verification tools to maintain commercial contracts with listed enterprises.

(f) Mitigating Land and Biodiversity Impacts: BRSR explicitly requires entities to disclose activities near ecologically sensitive areas, along with their impact on local biodiversity and communities. For companies operating wood-based supply chains, full traceability allows them to report zero-deforestation commitments, protect primary forest ecosystems, and verify that wood sourcing honors the land rights of local and Indigenous communities under the Forest Rights Act (FRA).

(g) Integration with International Market Access: BRSR compliance closely aligns Indian businesses with international due diligence laws, such as the EU Deforestation Regulation (EUDR) and the US Lacey Act. By utilizing BRSR's structured disclosure mechanisms alongside forest sustainability standards and digital tracking networks, Indian forest-based industries can establish verifiable chain-of-custody data required by global investors, credit rating agencies, and export markets.

3. FSC Solutions

Companies around the world trust Forest Stewardship Council (FSC) to provide assurance that their forest-based products support responsible forestry. This is because FSC puts the forests first, with its sustainable forest management standards as the core of the system. They enhance biodiversity, ensure fair wages, protect the rights of Indigenous Peoples, and tackle pressing global challenges like deforestation, forest degradation, and the climate and biodiversity crises. FSC sets the international standards for responsible forestry and is constantly working to keep the certification system relevant and robust to support compliance with emerging regulations.

Supply chain integrity is essential for maintaining trust in FSC-certified products. It verifies that materials are traced accurately through every stage of the supply chain. Supply chain integrity safeguards the value of FSC



certification by protecting the credibility of its label, enabling responsible companies to operate in a fair system, and ensuring that FSC can take action when integrity risks or violations occur. This article describes important FSC instruments to ensure traceability and system integrity in forest-based supply chains.

Getting started with FSC Trace: https://connect.fsc.org/getting-started-fsctrace

(a) FSC Check:

FSC Check is a risk-based screening tool used to review individuals or organizations applying for FSC certification or membership. It verifies that applicants' values and activities align with FSC's core requirements by collecting applicants' information and assessing their potential involvement in unacceptable activities such as illegal harvesting, human rights violations, or links to disassociated or blocked companies. Completion of FSC Check is mandatory before applicants can proceed with their certification or membership journeys.

FSC Check is based on FSC's Disclosure Requirements for Association, which uses an online dynamic questionnaire to identify whether new applicants for FSC certification or membership have any links to the unacceptable activities defined in the FSC Policy for Association. If the system detects potential risks, FSC will investigate the application and may decide not to proceed with the association.

FSC Claims Check - https://fsc.org/en/claims-check

(b) Policy for Association (PfA) and Violation Investigation:

Prior to deciding whether FSC will pursue a Policy for Association (PfA) violation investigation or a mediation process, it monitors and assesses the evidence available – either submitted by a complainant or gathered by FSC from publicly available sources. FSC also opens PfA violation cases proactively based on evidence gathered from third party sources. Information and evidence for proactive cases are gathered from media reports, legal cases, studies conducted by NGOs, findings of transaction verification loops, etc. After the preliminary assessment, if FSC decides to pursue an investigation into the complaint or proactive case, all concerned parties are notified, and a public announcement is made. The investigation report is shared with the organization under investigation and summary with the complainant.

(c) FSC Core Traceability Frameworks:

Chain of Custody (CoC) Certification

- Any business that takes legal ownership of FSC-certified goods (sawmills, paper manufacturers, traders, print shops) must hold a CoC certificate. The standard defines how certified wood is physically segregated or accountably tracked alongside non-certified material.
- Accounting Control Systems: Companies choose one of three systems to track materials:
  - ◊ Transfer System: 100% certified inputs yield 100% certified outputs (e.g., solid wood furniture).
  - ◊ Percentage System: Products are labeled based on the percentage of certified material introduced into a batch (e.g., paper made with 70% certified pulp).
  - ◊ Credit System: Credits are accumulated based on incoming certified volume, allowing a proportional volume of finished product to be sold as certified.

Know more: https://connect.fsc.org/certification/chain-custody-certification

Controlled Wood Standard

- It recognizes that supply chains often mix certified and non-certified fibers (creating "FSC Mix" items). To prevent harmful wood from entering these lines, this standard mandates strict risk assessments.
- Non-certified wood mixed into FSC products must avoid five specific unacceptable sourcing categories - illegally harvested timber, timber harvested in violation of traditional or civil rights, timber from forests where high conservation values are threatened, timber from forests being converted to plantations or non-forest use, and timber from forests in which genetically modified trees are planted.

Know more: https://connect.fsc.org/document-centre/documents/resource/374

(d) Wood Identification Techniques:

Wood identification technologies make it possible to trace the timber species and harvest location. Traditional wood anatomy enables scientists to determine genus and family, and even species, depending on the circumstances. Technologies such as isotope, DNA, and mass spectrometry can also help determine the origin of specific wood samples. Such testing can often determine the forest from where the wood originated provided samples from that forest are available for comparison. FSC has developed a long-term plan to systematically address integrity risks in the supply chains of its certificate holders. FSC is conducting a wood identification pilot project focused on iso-archiving. At present, FSC does not offer any commercial wood identification testing.

Listen to the podcast: https://open.fsc.org/entities/publication/3f32bde5-e2a8-4ab0-8f27-60edde8ea78e

(e) Geographic Information System Analysis:

Earth observation tools help identify land use change, Intact Forest Landscape disturbance and other spatial risks. For FSC, it is key to ensure an objective and informed auditing process of certified areas, as far as possible. FSC has developed its GIS portal, which enables FSC forest management auditors around the globe to access relevant geospatial information, which they can easily combine with up-to-date satellite derived data. This will make audits more effective, as it allows part of the process to be conducted off-site and with objective tools, while focusing the on-site part of the audit on elements that cannot be monitored and analyzed automatically, such as social aspects, management systems or changes occurring under the canopy. By



mapping the exact polygon boundaries of certified forest management units, FSC allows companies to trace products back to specific coordinates. This provides data required to comply with regulations like the European Union Deforestation Regulation (EUDR).

(f) FSC Trace:

FSC Trace is a private, blockchain-based traceability and transaction-verification tool designed to strengthen the integrity and transparency of FSC-certified supply chains. It functions as a secure digital ledger in which transactions between FSC certificate holders are recorded and matched, creating an auditable record of material flows across the supply chain.

This mechanism can reduce the risk of fraudulent or inconsistent volume claims, and it forms part of FSC's broader chain-of-custody assurance and verification framework. FSC Trace also incorporates confidentiality and access controls, allowing participants to determine what supply-chain information is shared with trading partners and other authorized parties. This is intended to protect commercially sensitive information while still enabling the verification and traceability of FSC-certified materials.

4. Oversight & Enforcement

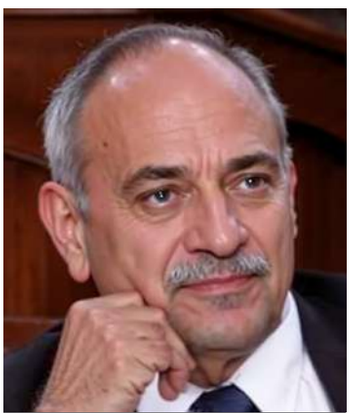
(a) Independent Audits:

FSC does not issue certificates directly. Instead, independent third-party Certification Bodies (CBs) conduct on-site audits. Assurance Services International (ASI) accredits the CBs and acts as the "auditor of the auditors". They evaluate CBs through unannounced field checks, shadow audits, and integrity investigations to prevent conflicts of interest and maintain uniform certification standards worldwide. FSC works closely with ASI to identify high risk supply chains and implement targeted oversight.

(b) Transaction Verification:

Transaction Verification (TV) loops are structured, data-driven processes conducted by ASI in coordination with FSC to identify potential integrity risks in high-risk supply chains, regions, products, or species. Within a defined scope and timeframe, relevant certificate holders provide purchase and sales transaction data through their certification bodies. ASI analyzes the data to identify volume mismatches, irregular trade patterns, and potential false claims, then conducts targeted investigations of higher-risk supply-chain clusters. Findings are assessed to identify non-conforming certificate holders and systemic control weaknesses. Based on the findings and ASI's recommendations, certification bodies and FSC may take appropriate action, including suspension or termination of certificates or blockage from the FSC system. TV loops are conducted in accordance with the FSC Transaction Verification Procedure.

Tax-free Agriculture Income from Agroforestry Supported Nurseries



R C Dhiman
Greenlam Industries Ltd.
Delhi



T D Khurana
Khurana Tax Associates
Rudrapur



J N Gandhi
Ashirwad Nursery, Rudrapur
(Ex-Unit Head, 2 Ex-Unit Finance Head & Ex-R&D Head at Wimco Seedlings (ITC-PSPD)

Introduction

Nurseries are backbone for sustaining the current tree culture in agroforestry that is undertaken by millions of farmers in different parts of the country. There are three main nursery growers viz., government institutions like state forest and horticultural departments; wood based industry (WBI); and small entrepreneurs including farmers which produce nursery plants of suitable trees to supply them free, at subsidized and commercial prices to plantation growers. State forest and horticultural departments have traditionally been growing nurseries of forest and fruit species respectively. Forest nurseries supply plants for afforestation and reforestation programmes on forestland whereas state horticulture departments to farmers to grow fruit orchards. State forest departments had also created specific nurseries to supply plants to farmers under externally aided and locally funded social and farm forestry programmes implemented in different states.

With closure of externally aided projects on social forestry in many states and fast emergence of private sector in promotion of plantations for wood production in agroforestry, nursery plant production and supply chain gradually shifted to private sector. As such, nursery production of a few top agroforestry planted trees especially that of Eucalyptus, Poplar, and Casuarina are happening in large number of decentralized private nurseries especially owned by small entrepreneurs. For example, Crores of clonal Eucalyptus plants are now produced in Alligudem cluster in Andhra Pradesh, Poplar saplings in Poplar growing region of north India, and clonal Casuarina around Pondicherry in south India. Eucalyptus is top planted tree in agroforestry and its clonal plant production base has gradually expanded to newer locations which also include Udham Singh Nagar in Uttarakhand, Saharanpur in Uttar Pradesh and Hoshiarpur in Punjab in north India.

Among corporate, Wimco Ltd. was the first company to start growing tree nurseries especially that of Poplar during mid 1970's and this activity was gradually shifted to its subsidiary company/unit Wimco Seedlings Ltd. ITC started growing planting stock of Eucalyptus during 1990s which was gradually spread to other paper based industries and now to some panel based industries. Income from sale of nursery plants in some corporate and by most private entrepreneurs including farmers is claimed as tax-free agriculture income, whereas, government nurseries collect and account it as revenue. This paper explores how nursery activities qualify for tax-free agriculture income under the existing tax regulations and land laws. This is further substantiated with 4 case studies of nursery growers who are virtually claiming tax-free agriculture income from nurseries. The information contained in this paper is solely for creating awareness; readers are requested to refer to the relevant acts and rules mentioned here for better understanding, interpretation and application.

Legal status of agriculture income from nurseries

Nursery production systems are treated as agriculture activities and income from them as agriculture income, at par with agricultural crop production, under Income tax Act 1961. Hon'ble Supreme Court vide its landmark judgment in the matter of Raja Benoy Kumar Sahas Roy v/s Commissioner of Income

Tax (CIT 1957) established that any agriculture activity would qualify for tax-free agriculture income if the raised agriculture produce involves performing of some basic operations like tilling of land, sowing of seeds, and planting with similar human interventions on the agriculture land itself. According to this ruling, if the nursery is maintained by carrying out basic operations on land and subsequent operations are carried out in continuation to the basic operations, then income from such nursery activities would be agricultural income not liable to tax under section 10. However, if the nursery is maintained independently without resorting to basic operations on land, then income from such nurseries would not be agricultural income and would be considered taxable under the income tax law.

To remove this ambiguity, the finance act 2008 introduced explanation 3 to section 2(1A) to clarify that income from saplings or seedlings grown in nursery is also agricultural income. The Telangana High Court (in A.G. Biotech Laboratories vs. PCIT) and various Income Tax Appellate Tribunals have ruled that income from sale of even tissue-cultured plants also qualifies as tax-exempt agricultural income (HCT 2025). However, income from simple purchase and sale of nursery plants; without agricultural operations like sowing, tilling and rearing plants and related human interventions; are treated as trade. For example, many plant traders purchase plants from any nursery, transport to distribution centers and supply them either to growers or sub-traders without performing basic agricultural operations in their growing. Such purchase and sale is treated as simple trade and is taxable at par with non-agriculture income.

Eligibility of land for nurseries to claim agriculture income

India has two land types belonging to revenue and forest sectors which are designated for the purpose of rights, taxation, development, administration and use. The ownership of each parcel of land is well recorded in Khatauni or Jamabandi (Khasra) for revenue land and in compartment history and settlement records for forestland. Revenue land is categorized based on its utility and ownership status viz., agriculture land used for growing crops; non-agricultural land for residential, commercial and industrial purposes; and government owned land (public land). Urban land owned by municipalities typically falls under a specific administrative layer that is between government land and non-agricultural land. In the hierarchy of Indian land records, this is generally classified as government land held by local bodies. Urban land may further be classified as municipal land, public utility land (civic utility land), common property land, and freehold land.

Agriculture activities including growing fruit nurseries have traditionally been undertaken on revenue land especially on agriculture land. However, some plant nurseries are also grown on number of other land types ranging from revenue category i.e., different land types like agricultural, non-agriculture, institutional, urban; and also on forest land. Further agricultural activities including growing of nurseries are not necessary be undertaken by those who hold land on their ownership, there are significant number of cases of landless farmers, trusts, entrepreneurs, companies and corporate who undertake agriculture activities of growing trees and nurseries on leased land and/or commercial land. Nursery growers may use land under their ownership, taken on lease under proper agreement from the land owner; and from family members under agreement, undertaking or affidavit. Creating nurseries on these diverse land types may have wider legal and taxation implications and interpretations. Taxation authorities hardly check the legal ownership title of the nursery land, their actions on monitoring nurseries is limited to proof of possession of land and tracking the financial transactions originated from agriculture land only if the assessees claim agriculture income from the sale of plants grown thereon.

Currently forest nurseries grow plants of multiple tree species for supplying plants for their planting on diverse land types including other than forestland. For example, Haryana Forest Department had grown 2.058 Crore plants in its nurseries belonging to 342 species of forest, fruit, ornamental, shrub and herb species during 2023-24 (Indian Woods & Allied Panels 18(4):Dhiman 2024), out of which significant number was reportedly supplied to farmers under different plantation schemes. Nurseries on designated forestland can only be raised by the state forest departments and such land cannot be leased out to third parties for non-forestry purposes including growing nurseries. Section 2(iii) of The Forest Conservation Act 1980 strictly prohibits assigning forestland to any private persons or corporations not owned by the government without the approval of central government. Hon'ble Supreme Court in its recent judgment in the matter of State of Karnataka & Others v/s. Gandhi Jeevan Collective Farming Cooperative Society for holding lease of 134 acres forestland for agricultural activities (agriculture and nurseries) was declared illegal clearly mentioning that such activities are strictly prohibited on forestland without the prior approval of the central government (INSC 2025). The forestland was leased to this society for agricultural activities during 1970 and was used for this purpose till then.

Horticulture nurseries grown in private sector including that by small entrepreneurs are often regulated and registered with state horticulture departments. Horticulture nurseries grown by government departments on institutional and agricultural land are treated as agriculture activities and are



often exempted from registration and licenses. For example; Maharashtra Fruit Nurseries (Regulation) Act, 1969, Section 2(b); The Andhra Pradesh Registration of Horticulture Nurseries (Regulation) Act, 2010; Punjab Fruit Nurseries Act, 1961 (and its 2021 amendment); and Jammu and Kashmir Fruit Nurseries (Licensing) Act, 1987 explicitly mention that horticulture nurseries grown and managed by government departments are considered as extension of public agricultural services and not included in the respective acts for licensing and registration. No such legal regulation for growing forest based nurseries exists in any of the state in the country. However, agriculture sector has recently issued guidelines for volunteer registration of nurseries including that of forest species for growing plants for planting on agriculture land (ICAR-CAFRI 2021).

Case study 1: Corporate (Wimco Seedlings) claiming agricultural income from nurseries

Wimco Ltd., is an ideal and appropriate case study to represent a corporate for claiming agriculture income from nursery activities. The name of Wimco /Wimco Seedlings is closely associated with Poplar culture in India. The merger and demerger of Poplar activities in the company witnessed changes from Agro-farm Forestry Division of Wimco Ltd. in 1977 to Wimco Seedlings Ltd- in 1984 to Wimco Seedlings unit of Wimco Ltd. in 2007 and finally to Wimco Seedlings unit of ITC-PSPD in 2014. Besides these administrative changes, Poplar sapling production and their supply to growers remained core competence of the company. Till date, Wimco Seedlings has been the top individual producer of Poplar saplings and has been generating a positive cash-flow that being a significant achievement among the corporate sector companies engaged in growing nurseries of agroforestry tree species in the country.

The finance related information of Wimco Seedlings is available in public domain in the form of segment information in the balance sheet of Wimco Ltd., before its formal merger with ITC in 2014. The finance related data–sets of Wimco Seedlings business were retrieved from Wimco Report and Accounts 2013 (https://itcportal.com) and Its Profit & Loss (as per Segment information of M/S Wimco Ltd. including claimed agriculture income from nursery and plantation activities) for the financial year 2012-13 is presented in Table-1. There has been periodical variation in its agriculture income due to fluctuating market conditions; yet, the company has, till date, uninterruptedly generated positive cash flow of tax-free agriculture income from its nursery activities.

The account summary for Wimco Ltd. (Table-1) includes three independent business lines viz., Safety matches under Wimco segment, Nurseries including major share of Poplar with small share of Eucalyptus and some other species, and wood & agricultural crops from its research farms under Wimco Seedlings segment; and Packaging and filling machineries under Engineering segment. Wimco Seedlings was incorporated as separate company during 1984 and have since undergone merger and demerger process. It was merged with Wimco Limited during 2007 and finally demerged and amalgamated with ITC under PSPD segment during 2013-14. Therefore, information of Wimco Seedlings as a separate segment is not available in public domain after the year 2012-13. The presented financial figures have undergone strict screening and scrutiny for expenditure and revenue through internal and third party audits by registered and certified credible agencies. Revenue generated from nurseries, wood and agriculture crops in Wimco Seedlings are accounted as agriculture income and from other two business lines as business income.

In Wimco's balance sheet, Wimco

Table-1. Segment information of Wimco Ltd. including that of Unit Wimco Seedlings Unit (Agri-forestry) for the year 2012-13 (Vale in Rs. Lakh)

S.No.	Information about Primary Segments	Agri-Forestry	Match	Engineering	Total
A	Revenue External				
A.1	Poplar sapling sale	1160.31			1160.31
A.2	Other Revenue	325.16	14453.61	1779.40	16558.17
A.3	Total Revenue External	1485.47	14453.61	1779.40	17718.48
A.4	Inter-segmental Revenue	182.58	-		182.58
A.5	Total External & Internal Revenue	1668.05	14453.61	1779.40	17901.06
A.6	Elimination of Inter-Segmental Revenue	(182.58)			(182.58)
A.7	Total Revenue	1485.47	14453.61	1779.40	17718.48
B.1	Operating Profit/(Loss)	896.68	(335.42)	104.22	665.48
C.1	Interest Income	5.95	0.47	-	6.42
D.1	Profit/(Loss)-(Segment-wise)	902.63	(334.95)	104.22	671.90
D.2	Unallocated Expenditure net of unallocated Income				(482.21)
D.3	**Profit/(Loss) as per Wimco Ltd. financials**				**189.69**

Seedling was the single major profit contributor of Rs 902.63 Lakh during the year 2012-13. Safety match business –the major business line by volume was in losses worth of Rs. 335 Lakh while Engineering segment recorded a modest profit of Rs. 104 Lakh. The financial figures presented in the Table-1 clearly indicates that Wimco Seedlings net profits were 60% of its total revenue generated and there is no parallel example in the country to make tree nurseries as independent business line and profitable activity in corporate sector, even now. Its strength is in better integration of Poplar nurseries with its R&D producing high yielding clones predominantly planted by farmers in major Poplar growing region of the country. The major income of Wimco Seedlings is treated as agriculture income in taxation and thus it could be named truly an Agriculture company/unit.

Case study 2: Small entrepreneur growing Poplar nursery first time

An entrepreneur based in Poplar growing region of north India with a strong agriculture and finance background and with good experience of growing Poplar plantations on his fields ventured into growing Poplar nursery for sale of saplings to farmers. He hired land on lease by paying lease rent at market prevalent rates and maintained record of every segment of expenditure and income in growing and selling Poplar saplings from his nursery. The summary of financial statement from his nursery activity is presented in Table-2.

Table-2. Profit & Loss Account of small nursery entrepreneur (Year 2024-25)

Particulars	Amount (Rs)
Income	
Sales of Saplings	5,568,430
Expenses	
Wages	1,313,018
Salary	163,000
Staff Welfare	3,505
Travelling	249,816
Material Consumed	464,925
Rent	1,342,950
Power & Fuel	11,000
Repair & Maintenance	190,095
Freight	54,120
Watch & Ward	140,400
Bank Charges	1,149
Donation	11,000
Advertisement	7,067
Legal & Professional	2,000
Printing & Stationery	70,227
Fee Rate & Taxes	1,502
Postage	67
Change in Inventory	**(1,346,552)**
Total Expenses	**2,679,289**
Profit/(Loss)	**2,889,141**

The entrepreneur has claimed nursery income as tax free agriculture income in his ITR for the Assessment Year 2025-26 (Financial year 2024-25) which was allowed in the intimation order issued by the IT department.

Case study 3: Experienced entrepreneur in Poplar & Eucalyptus nursery

A senior research manager- an agriculture graduate having worked in the reputed company immediately on superannuation received his retirement benefits and also had some handholding to invest in some activity for passive income after retirement. During his service period, he has worked with senior nursery specialists where he has acquired core competence in forest and horticulture seedling/sapling production especially that of clonal Eucalyptus and Poplar nurseries. Finally he decided to use his core competence of clonal nursery production and ventured into setting his own nursery infrastructure, and registered his nursery as Micro Enterprise under the Udhyan Scheme of the Ministry of Micro, Small and Medium Enterprises, GoI during 2025. He set aside 2 acre dedicated area for Eucalyptus clonal production with additional 7 acre acquired leased land for Poplar nursery. For Eucalyptus and Poplar nurseries, he procured the mother material of selected clones, from different sources, which are in high demand in north India and established Eucalyptus cutting production area of 1 acre, plant

maintenance and loading site of 0.75 acre and remaining areas of 500 m2 as mist chamber. He paid an amount of Rs. 4,04,202 as lease rent for land used for growing Poplar nursery by using major clones in demand.

It took him at least one year to create back-end cutting production (VMG) facility and other necessary ingredients for clonal production and virtually started his Eucalyptus clonal plant production and that of Poplar nursery during 2025-26. During early 2026, he expanded his Eucalyptus clonal nursery by adding another chamber of 300 m2 area.

Financial statement compiled for the year 2025-26 is given in Table-3 which indicates his net profits of Rs.39.49 Lakhs -a very significant achievement in the first year of operations itself. His total expenses in nursery operations were of Rs. 26.80 Lakh and revenue collection of Rs. 66.29 Lakh. He has carried forward plant inventory worth of Rs 7,83,907 in the form of unsold Eucalyptus plants and Poplar cutting material which was used for raising this year nursery (2026-27). He achieved a sale value of Rs. 37.2/ Poplar sapling and Rs 8.97/clonal Eucalyptus

Table-3. Statement of Profit & Loss for the year 2025-26

Particulars	Amount (Rs)
Income	
Sales of Saplings	5,568,430
Expenses	
Wages	15,29,996
Staff Welfare	920
Depreciation	2,66,588
Material Consumed	9,90,787
Rent	4,04,202
Power & Fuel	30,938
Repair & Maintenance	1,81,367
Freight	55,790
Telephone Expenses	2,250
Bank Charges	466
Donation	1,000
Change in Inventory	**(7,83,907)**
Total Expenses	**26,80,397**
Profit/(Loss)	**39,49,218**

plant. Eucalyptus contribution was 47% and that of Poplar was 53% of revenue generated during the year. His realization from Poplar could have been higher since good number of his grown saplings were booked in advance at lower rates during the early stage of nursery production. The Poplar sapling rates varied in the market from around Rs. 20/sapling to Rs. 50/sapling during the year. Branded nurseries sold plants at higher rates towards the end of Poplar planting season. Based on his service experience, he has well maintained necessary documents on expenses and revenue and has filled this year ITR (AY 2026-27) by claiming nursery income as tax free agriculture income. This case study establishes that a person who has worked at low salary throughout his carrier could easily transform his economic condition with his core competence in nursery production.

Case study 4: A group of experienced Poplar nursery growers

Poplar was initially promoted 1977 onward by Wimco Ltd. for match wood production in north India, this being the time line when planting trees for commercial wood production on farmland was not preferred. It was further promoted under PPP model from 1984 to 1995. On termination of PPP model in 1995, a large number of employees from Wimco and Wimco Seedlings got separated and started their own Poplar nurseries to supply its saplings to growers. Currently, Poplar nurseries are grown by corporate like Wimco Seedlings (ITC-PSPD), other companies, institutions, Ex-wimcoites, Ex-contractors & laborers in company's nurseries, individual entrepreneurs, plant & wood traders, and farmers.

During just concluded 2025-26 planting season an estimated of around 5 Crore saplings were sourced by farmers from Poplar nurseries for field planting, out of which Wimco Seedlings was the single large supplier with 75 lakh saplings, Ex-wimcoites block consisting of over 2 dozen retired employees collectively supplied 1.5, Other entrepreneurs 1 Crore, contractors & labour category 1 Crore, Plant and wood traders 30 Lakh, Other companies 15 Lakh, farmers 10 Lakh and institutes (mainly Bihar and JK forest Departments, a few state agriculture universities and KVKs) 20 Lakh. Total nursery production was around 6 Crore saplings which also included saplings to produce next year nurseries in addition to some unsold and damaged inventory. The expenditure and income statement of sample Poplar nurseries grown by the selected Ex-wimcoites block, for the year of 2025-26, is given below:

There are two streams of Poplar nursery production viz., first commonly referred as High-tech nursery in which mini cuttings are first planted in containers (poly bags and root trainers) and plantlets produced from them are shifted during April-May months to open nursery beds and the second is traditional mode in which stem cuttings are directly planted in the nursery beds. Of late, most nurseries grown by the experienced growers like Wimco Seedlings and Ex-Wimcoites are using mini-cutting approach. Traditional nursery production is now limited to a few growers who raise it to consume the last year unsold surplus Poplar saplings, and stagger their large production system by using this additional nursery planting window for better nursery management and also by those who are not well versed with High-tech nursery production. The cost of production is slightly low in High-tech nursery production in addition to less production cycles of 7-8 months compared to around 1 year in case of traditional nursery production. The financial figures from sample High-tech nurseries were obtained and average per acre expenditure and revenue generation was compiled (Table-4).

Table-4. Abstracted financial status of High-Tech Poplar nursery by Ex-Wimcoites Block during 2025-26

Sr. No.	Particulars	Cost (Rs.)
1	Growing plants in containers (cutting material, container filling, planting cuttings, rearing plants and their transportation to field nurseries)	3917.11
2	Land preparation, planting plants, weeding, hoeing, irrigation, de-budding, singling, earthing-up, drainage, fixing marking taps, uprooting, loading etc	30909.08
3	Material cost (Poly sheet, P. bags, fertilizers, chemicals, implements, hired machinery, traveling, stationary etc.	9029.01
4	Land lease rent	57585.00
5	Total	134440.50
6	Cost of production (9500 saplings/acre)	14.15
7	Gross earnings per/acre (9500 saplings @Rs. 38.50/ETP)	365750.00
8	**Net profit (Rs. /acre)**	**228000.00**

The average nursery area grown by individual grower was around 10 acres and varies widely from a few acres to around 25 acres. With an average profitability of Rs. 2.28 Lakh per acre, the average net tax-free agriculture income of an individual nursery grower was around 22 Lakh per annum which is quite handsome for these retired ex-wimcoites.

Documentation

Proper documentation helps nursery growers to get quick and normal assessment of ITRs and further provides leverage for lowering the tax liability when agriculture income get clubbed with that from other sources especially when total income (both from agriculture and non agriculture sources) increases to higher tax slabs. Some nursery activities though may be of small nature yet expenses incurred on them can become significant when considered in totality. Accounting maximum expenditure with proper documentation is therefore important to justify such expenditure in addition to provide conclusive proof of growing nurseries during assessment of ITRs. For example, a significant number of current Poplar nursery growers belong to a category of ex-employees of companies who are certainly getting EPF & superannuation pensions and may be some other incomes. Nursery growers avoiding and ignoring basic documentation may face ITR scrutiny with notices from ITD.

An indicative list of documentation for nurseries is given below

1. Khasra Khatauni of the nursery land, from revenue department, with entries of ownership of land and current use as nursery.
2. Land agreement with land owner clearly mentioning terms and conditions like the purpose, period of lease and lease amount.
3. Undertaking or affidavit or agreement with family members if the stated land is used for growing nursery without paying lease rent.
4. Proof of making payment of land lease rent to land owner. It should be through proper banking channels.
5. Receipts and bills of sale of plants with details like address and signature of purchaser, number of plants supplied, and rate & total amount received.
6. Agreement with plant buyers including companies, if any, for supply of plants
7. Summary of plant Inventory produced and sold.
8. Bills or receipts of material like fertilizer, pesticides, insecticides, HSD etc. Electricity bills are also valid documents for expenditure, if electricity is used for irrigation of nursery plants.
9. Detail of loan taken from banking system or third party, if any.
10. Bank statements of all bank accounts including Kissan Credit Cards having inward and outward transactions related to stated nurseries.

Many Poplar nursery growers take land on lease but invariably fail to get entry of nursery in land records (Khasra) from revenue officials. This may create trouble in assessment of agriculture income in ITRs. Entering nursery use on revenue records benefits both the nursery growers and land owners for accounting tax-free agriculture income. Leasers can claim agriculture income from leased money and nursery grower as expenditure on lease rent by simply submitting khasra-khatauni with entry of nursery. Lease rent received against land leased for agriculture purpose is treated as agriculture income as per existing tax laws whereas lease rent received against land leased for the purpose of other than agriculture is taxable. Tax deduction on land rent payment is not required for up to Rs 6 Lakh per annum from the financial year 2025-26. Making entries of actual agriculture activity in revenue records may thus not be considered as choice but a compulsion for claims on agriculture income.

Payment system

Agroforestry supported nurseries grown by entrepreneurs are in highly unorganized sector and have low visible business activity. However, the case studies presented here are indicative of handsome income received by them from selling plants. Some grey areas in nursery activities are payment systems, accounting cost of planting material & it's carrying forward in nursery production



costs, and ignoring accounting of small expenditures made on cash basis. Many High-tech nurseries like tissue culture labs and clonal production facilities involve one time and recurring heavy expenditure on infrastructure. This heavy expenditure is proportionately distributed throughout the physical life of the infrastructure and accounted in the cost of production of nursery plants; as such, concerned nursery growers may account it in their expenditure statement to lower tax liability.

Nursery transactions involving purchase and sale of plants are predominantly happening in cash and it is a grey area for the large number of plant sellers and buyers. Financial regulations encourage transactions through banking channels including payment through digital gateways. Government declared policy objective is to move towards cash-less economy, as such, a new provision namely Section 269SU was inserted in ITA vide the Finance (No. 2) Act 2019, which provides that every person having a business turnover of more than Rs. 50 Crore during the immediately previous year shall mandatorily provide facilities for accepting payments through prescribed electronic modes.

The payment by nursery growers for any expenditure exceeding Rs. 10,000 should preferably be made through banking channels. There is a limit of Rs 1 Lakh on UPI transactions for 'peer to peer' or 'peer to business; Rs.2 Lakh for transactions related to capital markets and insurance; and Rs.5 Lakh for tax payments and payments to educational institutions, hospitals and IPO applications. This is a cumulative daily cap one can transfer using UPI. The transactions higher than these limits will be declined by banks or the UPI app. Banks are duty bound to report cumulative credits (including UPI) exceeding Rs. 10 Lakh in a savings account in a financial year to ITD.

Nursery growers should not receive cash exceeding Rs 1,99,999 Lakh from a single person in a single day or issue any bill exceeding Rs. 199,999 against part or full cash payment to a single person in a single day. As per Section 269ST of ITA, one cannot receive cash of Rs. 2 Lakh or more from a single person in a day, in a single transaction, or for a single event/occasion. This is illustrated with few examples given hereunder.

Example 1 - A nursery sells plants to a buyer in a single day for Rs 3 Lakh, and the buyer pays Rs. 1.5 Lakh in cash in the morning and Rs. 1.5 Lakh in cash in the evening. Total cash is Rs 3 Lakh, which exceeds the limit.

Example 2 - A nursery issues bill against supply of plants worth Rs 2.5 Lakh and pays Rs. 1.5 Lakh in cash on one day and Rs 1 Lakh in cash on some other day. This violates the law because it is a single transaction exceeding the limit.

Example 3 - A nursery charges a total of Rs 2.25 Lakh, which includes Rs 1.90 Lakh as cost of plants and 0.35 Lakh for packing the plants for long distance transportation. The total of Rs 2.25 Lakh in cash for one occasion violates the law.

Example 4 - A nursery issues bill against supply of plants worth Rs 3.5 Lakh and receives Rs 2 Lakh by banking channels and Rs 1.5 Lakh in cash even on different dates. This violates the law because the bill is considered a single transaction. Violating this limit attracts a 100% penalty on the amount received. Hence, it is better to make a habit to receive payments through banking

channels against high value sales.

UPI payment system has fast evolved as main payment system and with 50% of the total transactions; India now leads the world for making the country's economy towards cash-less. UPI also needs better integration in nursery payment gateway too. UPI payment system is easy, quick and valid documentary proof for any transaction for the purchase and sale of nursery plants. For ease in documentation, the information on UPI payment system could be compiled in tabular form showing the names of buyer/seller, amount, transaction No., bank account No., bank/branch, date of transaction, and purpose of transaction (sale/purchase of produce). This compiled statement could be submitted along with the copy of the bank statement of connected bank account to the assessing officer if and when demanded.

Conclusion

The current Poplar and Eucalyptus clonal culture is predominantly based on the clones developed by Wimco Seedlings and ITC-PSPD respectively. Some government research establishments have now started charging royalty for use of their developed varieties and clones being grown by private nurseries under agreements. In comparison, the private sector companies are freely allowing their developed clones being used by small nursery growers to produce nursery plants. The major share of Poplar and Eucalyptus clonal planting stock produced by numerous nurseries is based on clones developed by Wimco Seedlings (now part of ITC-PSPD) and ITC-PSPD respectively. There are also a few clones of JK Papers and Pragati Biotech which are freely grown by nurseries in some parts of the country. India is a welfare state where government institutes support growers with free flow technology and material developed by using public money, whereas, private sector entities developed these clones using own resources. This reverse trend in tree improvement of select commercial trees and their plant production & supply chain, undertaken by selected companies at their cost, is one of the reasons for the success and sustenance of agroforestry landscape in the country.

Wood based industry and small entrepreneurs engaged in nursery production are doing a great service in sustaining Agroforestry landscape, helping in developing a huge wood resource on farmland, developing a significant production and supply chain for planting material, providing technical support to plantation growers, providing employment to large number of skilled and unskilled workers, improving economic condition of plantation growers etc. Most of these entrepreneurs were associated, at some time of their past, with branded companies initially with Wimco/Wimco Seedlings followed by ITC-PSPD and thereafter with JK papers, Star paper mills, BILT etc. and are now using their life long experience in this activity.



Handling of Forest Genetic Resource and Creation of National Bureau for Forest Genetic Resources for Forestry and Agroforestry in India – Retrospect's and prospect's



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Introduction

There was a global movement on Forest Genetic Resources conservation in 1970's as Tree Improvement Programs were launched for Alder, Ash, Birch, Ceder, Cypress, Dutch Elm, Eucalyptus, Oak, Pines, Poplars, Sequoia, Spruce, Willows and many other tree species in western countries. FAO took up the special task of documenting forest genetic resources (FAO, 1973) and published species wise data. Series of documents were published as "FAO / IUFRO / FORGEN" Reports and in UNASYLVA journal outlining the methods on Tree Improvement and Tree Breeding with utilization of genetic resources. These bulletins were used for training the staff engaged in Forest Genetics and Tree Breeding activities. At that time there were no books available on Forest Genetics and Tree improvement unlike agricultural crop improvement. In Germany, Thunen Institute of Forest Genetics was set up in 1951 and this institute was bringing out an esteemed journal "Silvae Genetica" (now Vol. 75 in 2026) published by J D Sauerlander's Verlag, Frankfurt. Germany. In USA, Institute of Forest Genetics at Rhinelander, Wisconsin was started in 1955. Three books to be mentioned here are widely referred on Forest Genetics and Tree breeding. viz., Introduction to Forest Genetics by Jonathan W. Wright (1976), Applied Forest Tree Improvement by B. Zobel and J. Talbert (1984) and Modern Methods in Forest Genetics by J. P. Miksche (1976). Mostly the topics discussed were geographical distribution of a given species, seed orchards and seed improvement, provenance and progeny trials, haploid and polyploid breeding, pollination mechanism (open pollination, self-pollination, General and specific combining ability), inbreeding depression, heritability and genetic diversity, clonal selection, hybrids etc., subjects.

Plant Descriptors and Genetic Resources

In 1980, A Directory of Forest Genetic Plantings in Michigan was published which gave details about the species, plantation number and date, country, ownership, material and purpose, originating agency, number of seed lots, acreage, etc., details (Anon, 1980) which exemplifies how to handle Forest Genetic Resources. A movement was launched by Hacket (1983) who developed modules to describe plant species which is known as "Descriptor" and a good number of plants descriptors were published for agricultural crops such as potato, sugarcane, rice, wheat, horticultural crops, mulberry, cardamom etc. Hacket (1983) says that the coming of computers has further aided creation of data base which can be searched by the researcher easily on genetic resources. A Descriptor for the cultivated potato by Huaman, et.al., (1977) under International Board for Plant Genetic Resources (IBPGR) is worth mentioning here. No such Descriptors were available for important forest trees in India as any species to improve, requires intra and inter specific variation data for drawing up a Tree Improvement Program (TIP) on scientific lines.

The "New Eucalyptus Forests" came to light in 1984 when Aracruz Celulose S. A., Brazil was awarded the 'Marcus Wallenberg Prize' in Falun, Sweden in 1984 for innovation in vegetative propagation and development of package of practices for nursery and plantations of Eucalyptus with root trainer technology. Clones with high productivity were developed for many Eucalyptus species as well as hybrids were developed such as Urograndis. This project was started in 1967 and continued for a decade and half resulting in spectacular results in productivity making Brazil the number one country in the world for wood pulp production and export (Anon, 1984).

This R&D was kept as a top secrete by the Company for more than 15 years. The genetic resources utilized contained 54 species, 1254 provenances and 5000 plus trees and 150 clones were shortlisted but only 31 high yielding and disease resistant clones were used in the plantation programme.

In January 1986, a National Seminar on Forest Seeds was held in Hyderabad under Indo-Danish Project on Seed Procurement and Tree Improvement (IDPSPTI) and the author was in the organizing

Parameter	Earlier Eucalyptus Seedling-based Forests (7 yrs)	New Eucalyptus Clonal Forests (7 yrs)
Yield (m3 /ha/yr)	33	70
Wood Basic Density (Kg/m3)	460	575
Wood Pulp (%)	48	51
Forest Productivity (t/pulp/ha/yr)	7.85	18.45

committee. A copy of the Aracruz document was brought by a delegate (Mr. Lakshmikanthan, Manager Plantation) of Rayalaseema Paper Mills, Kurnool, Andhra Pradesh. This document was xeroxed and circulated to FRI institutions and Paper Industries for initiating Plantation R&D (authors personal experience).

In Germany – EUFORGEN European Forest Genetic Resources Programme was started in 1985.

International Union for Conservation of Nature (IUCN), United Nations Environment Programme (UNEP) and World Wildlife Fund (WWF) dialogue on biodiversity yielded good results. The Biodiversity Convention was signed by the Heads of over 150 governments at Rio de Janeiro in 1992. It has helped to articulate the growing global concern for saving and sharing the genetic wealth of our planate. The main objectives of the convention was the conservation of biological diversity. It was emphasised that the plant genetic resources are to be collected, evaluated, and supplied for breeding high yielding varieties. It is contemplated that the germplasm is needed for adaption to a wider range of agroecological conditions and should have a strong focus for future breeding programmes (Swaminathan and Jana, 1992).

The Indian Government enacted The Biodiversity Act 2005. This Act has three levels of framework such as: National Biodiversity Authority (NBA); State Biodiversity Boards (SBBs) and Biodiversity Management Committees (BMCs). The objectives emancipated were: Conservation of biological diversity; prevent biopiracy and ensure fair and equitable biological resources; Compensating local communities and individual farmers for preserving diversity and traditional knowledge; Free movement of germplasm both nationally and internationally for effective utilization of plant genetic resources; Plant Breeders right and farmers right through IPR. The methodologies are evolved based on the Union for the Protection of New Varieties of Plants (UPOV). It is stated that farmers and breeders are allies in the common task of advancing biological productivity and their rights are to be respected.

Indian National achievements

Agriculture and Animal Husbandry

Genetic improvement of agricultural crops was well developed and was at par with the global standards. IARI rice, wheat, pulses etc., agricultural crop varieties were released as per the laid down procedures. In India, research efforts on varietal improvement brought significant achievement on maize, wheat, rice, sugarcane etc., crops. High-quality research on sugarcane breeding and release of Co (Coimbatore) varieties (303 number of varieties) was an excellent example which is acclaimed world over. Tobacco varieties released is also an outstanding example as still these varieties are cultivated world over by tobacco growing countries. Rapid progress was made in respect of wheat cultivation through 'Green Revolution' making India self-sufficient on Food front. Both agriculture and horticulture crops improved under Indian Council of Agricultural Research (ICAR) set up and many varieties were released and Food security is achieved.

National Bureau of Plant Genetic Resources (NBPGR)

A major milestone in agriculture is achieved as "The National Bureau of Plant Genetic Resources" (NBPGR) was established in 1977. Plant exploration activity and conservation of germplasm of useful species was taken up. Gene banks were set up to provide 'True Seeds'. Introduction of germplasm and export of germplasm was handled. Registration and release of plant varieties was taken up with documentation (Hardas, 1978).

Protection of Plant Varieties and Farmers Rights (PPV & FR) Act 2021

Recently, Government of India enacted "Protection of Plant Varieties and Farmers Rights (PPV & FR) Act 2021". The PPV & FR adopts sui-generis system and in conformity with International Union for the Protection of New Varieties of Plants (UPOV), Geneva. This PPV & FR Act is an Indian Law that creates a special system to protect new plant varieties and the rights of both farmers and plant breeders. India enacted this law to meet global trade rules while keeping seeds accessible in equitable and fair manner for local growers. The objectives of this PPV & FR Act 2001 are:

- To establish an effective system for the protection of plant varieties, the rights of the farmer and plant breeders and to encourage development of new varieties of plants.

- To recognize and protect the rights of farmers in respect of their contributions in conserving, improving and making available the plant genetic resources for development of new plant varieties.

- To accelerate agricultural development in the country, simulate investment for R&D both in public and private sector for development of plant varieties.

- Facilitate the growth of seed industry in the country which will ensure the availability of high-quality seeds and planting material to the farmers.

The Functions assigned to PPV & FR are - Registration; Develop DUS (Distinctiveness, Uniformity and Stability) test guidelines for new plant species; Documentation of varieties registered; Catalogue facility for all varieties of plants; Documenting, indexing and catalogue of farmers varieties; Recognizing and rewarding farmers, communities involved in conservation; Improve and preserve plant genetic resources; Maintenance of National Register of plant varieties and Maintain National Gene Bank.

The other international trade related agreements are General Agreement on Tariffs and Trade (GATT) - 1994 and Trade related aspects of intellectual property rights (TRIPS) - 1995.

Forestry

Forest Research Institute (FRI) was a leading institute which has two important branches viz., Forest Genetics Branch and Silviculture Branch. These branches have carried out Tree Improvement work on Teak, Eucalyptus, Rosewood, Sandal etc., species. FRI is the first institute to develop Eucalyptus hybrids (FRI 4, FRI 5) in the world. It focused first on seed improvement by establishing Seed Stands (SS) and Seed Production Areas (SPA) and established few Seedling Seed Orchards (SSO). All the above work was presented by Kedarnath in 1963, on the status of forest tree breeding in India in FAO / IUFRO World Consultation on Forest Genetics and Tree Improvement Seminar held in Stockholm (Kedarnath, 1963).

Improvement through species hybridization E. tereticornis x E. camaldulensis was made in 1970 and field trials were taken up for this FRI series of hybrids (FRI 1 to FRI 13). Out of these, FRI 4 and FRI 5 were tested in several locations in India (Venkatesh, 1981). The germplasm of all these varieties was preserved in FRI campus. But today we do not find the plots containing the Eucalyptus species and hybrids in FRI leaving a few trees still growing in the campus. Similarly, the germplasm of Sandal species and varieties was assembled in Institute of Wood Sciences and Technology (IWST), Bangalore campus and Gottipura Experimental station in 1980, now it is not available as a Laboratory building has come in IWST campus in place of Sandal Gene Bank and precious germplasm was stolen by smugglers in Gottipura.

In 1977, FRI formed 12 tree-based institute to intensify TIP such as “Indo-Danish Project on Seed Procurement and Tree Improvement (IDPSPTI), Hyderabad” for Teak, Rosewood and Gmelina. “Sandal Research Centre (SRC), Bangalore” for sandalwood. “Eucalyptus Research Centre, Hyderabad” for Eucalyptus, “Tropical Pines Research Centre, Ooty” for more than a dozen tropical pines introduced from Latin America, “Pine Research Centre, Simla” for chir pine etc. All these centres later were elevated to institute level in 1988. Virtually, it took 37 years to establish the “Institute of Forest Genetics and Tree Breeding” (IFGTB) at Coimbatore, India when we compare it with the worlds first institute on Forest Genetics established in 1951. The progress was slow but it took place.

Each centre developed the methodology for TIP. Both SRC and IDPSPTI identified gene resources, formulated and published the formats for TIP. The First record of Clone Release under FRI, Dehra dun that a Sandalwood Clone SRC – 1 was unveiled during an official function held in Sandal Research Centre / Forest Research Laboratory (now IWST), Bangalore in 1982. Shri. G. R. Mavinkurve IFS, CCF (Retd.), Karnataka handed over the clone to Shri. S. Shyam Sunder IFS, PCCF, Karnataka. Shri K. R. Venkatesan IFS, Conservator of Forests, SRC said that SRC-1 clone is selected from 8 yrs old plantation in Sholapuram, Pudukottai, Thanjavur, Tamil Nadu. The heartwood content was 8 kgs and sandalwood oil content was 3.6%.

Though Eucalyptus FRI 4 and FRI 5 were handed over to State Forest Departments (SFD) for trials but are not released by FRI at that time because a well laid out procedure for release of variety / clone for forest tree species was not available. There are many tree varieties of Indian tree species such as Sandalwood (Navil kannu, Nagar kannu, Thindlu, Anchetty, Noganur varieties); Teak (Teli variety) and Red-sanders (wavy grained variety) which are to be cloned and released as useful germplasm for breeding and become part of the Central Gene Bank.

For Indian forest tree species there are no detailed Descriptor available. However, the first Descriptor is published on Sandalwood in India (Kulkarni, 1996). Species wise Descriptors is the need of the hour as the data on variations can be computed which will help tree breeders in improving the species for the required traits and in DUS trait documentation.

Karnataka Forest Department did genetic improvement work on Jackfruit and established seed source trials and shortlisted best trees with reference to fruits with sweetness, higher number of fruits per tree. The varieties were identified bearing fruits with a firm flesh and those with a soft flesh. A third type called Rudrakshi is also grown in south India. A new variety Singapore type or Ceylon jack was introduced in Tamil Nadu. All these types along with wood yield are required to be developed for WBI. The propagation is through seeds and by air-layering. Cutting propagation and registration and release of variety is the needed for this species. There are many other species (Grevillea, Mahogany, Ailanthus and many other agroforestry tree species) which require genetic resource assessment and Tree Improvement.

In later years, Tree Improvement of Teak, Shisham, Eucalyptus, Gmelina,



The First record of Clone Release under Forest Research Institute, Dehra dun that a Sandalwood Clone SRC – 1 was unveiled during an official function held in Sandal Research Centre / Forest Research Laboratory (now IWST), Bangalore in 1982. Shri. G. R. Mavinkurve IFS, CCF (Retd.), Karnataka (left side in photo) handing over the clone to Shri. S. Shyam Sunder IFS, PCCF, Karnataka (Right side of photo). SRC-1 clone characteristics are displayed on the board – Shri K. R. Venkatesan IFS, Conservator of Forests, SRC said that SRC-1 clone was selected from 8 yrs old plantation in Sholapuram, Pudukottai, Thanjavur, Tamil Nadu. Heartwood content – 8 kg, Sandalwood oil – 3.6%.

Melia, Casuarina, Subabul, Acacia etc., trees resulted in improved clones / varieties under forestry under ICFRE. In the private sector, WIMCO, ITC Bhadrachalam, JKPM, TNPL etc., organizations have made spectacular contribution in popularizing clonal agroforestry. For Eucalyptus, CSOs were established in Seonthi, Haryana with 24 Eucalyptus clones with single plot design by Haryana Forest Department.

ITC since 1989 developed 107 Eucalyptus, 15 Casuarina and 12 Subabul clones and gave it to growers for cultivation (Kulkarni, 2014). Apart from ITC, P23 clone by Pragathi Biotech, JKPM, TNPL, etc., have given Eucalyptus clones for growing in farmers field. Poplar G3 and G48 clones were given to farmers by WIMCO Seedlings Ltd., (Chaturvedi, 1982). IFGTB has released 30 clones of Eucalyptus and Casuarina for enhancement of productivity of plantations. Recently, in 2026, 18 varieties were released by ICFRE which are new clones. On 11-9-2026, 3 Teak clones are released with the approval of Varietal Release Committee (VRC) under chairmanship of Director General of Forests, Government of India.

Efforts for development of protocol for Registration and Release of clones / varieties

ITC developed Eucalyptus clones through TIP and was looking for registration of clones with the available mechanism in agricultural sector in 1997 as forestry sector has not developed registration and release of clone's mechanism by that time. The author approached NBPGR, New Delhi and discussed the issues of registration of Eucalyptus clones. The outcome of the discussion was - presently there is no mechanism available for release of forestry tree clones unlike agriculture as 8 generation testing is done for agricultural crops for testing purity before release of a variety. The process of agricultural crop breeding and forestry tree breeding is quite different hence; registration and release of clones / varieties is difficult. NBPGR also does not have vast land to test the forest tree clones which require sizeable land for testing and conservation of the germplasm.

As the forestry tree clones are developed through natural selection, patent cannot be awarded. However, the Director said that Accession number can be given by NBPGR which can give Intellectual Property (IP) for the clones developed by ITC. This Accession Number does not amount to release of clones by the NBPGR as evaluation is not done as per the protocol of release of variety under agricultural crops system. The Director further opined that, NBPGR has mandate for agricultural crops only under the Ministry of Agriculture while, forestry tree varieties come under the Ministry of Environment and Forest (MoEF) and advised to take up the issue with MoEF.

In 1997 itself, ITC approached ICFRE and apprised the matter of registration of nurseries and clones of forestry tree species. Mr. Piare Lal, Vice President, ITC; Shri A. S. Dogra IFS, PCCF Punjab; Shri R. P. Singh IFS, ADG, ICFRE and other eminent foresters and scientists, initiated process for the development of the protocol for registration and release of clones. A series of meetings were held in ICFRE which Mr. Piare Lal and the author attended.

In 2005, the author presented to the Grover Commission on forest policy that there is a need to develop registration of nurseries and registration and release of clones for forestry sector as agricultural sector guidelines does not fit in. The Grover Commission recommended for action in this regard.

Though the process was slow, around 2006, a draft was prepared and circulated by ICFRE on registration, testing and DUS guidelines for forestry

tree clones along with institutional frame work. Later, the approved guidelines for testing and release of tree varieties and clones with DUS testing guidelines (especially for Teak, Melia dubia) was published by ICFRE (2008) and the same is followed now.

Royalty payment for clones developed by ICFRE and its unit IFGTB is made possible as IPR stands with the institute. The concerned industry has paid the royalty to ICFRE with an agreement (e.g. Andhra Pradesh Paper Mills has paid royalty for Casuarina clones).

In the absence of registration and release of clones for a considerable time (1995 to 2008) private companies (ITC, JKPM, TNPL etc.,) who developed clones since 1995 gave clones to the growers without any royalty and not bothered to register and release of the clones by ICFRE as these clones are under cultivation for a long period of time under agroforestry.

Creation of National Bureau of Forest Genetic Resources (NBFGR)

Forestry needs an independent system which addresses needs of forestry (QPM, breeding, etc.,). Forestry clones and varieties cannot be registered under NBPGR as it falls under agriculture domain while, forestry domain is with MOEF. A need is felt now as the present mechanism of ICFRE, the R&D institution such as ICFRE itself develops varieties / clones and are registering and releasing the clones / varieties which amounts to self-evaluation and self-certification. In the interest of farmer and WBI, creation of an independent "National Bureau of Forest Genetics Resources" (NBFGR) at National level with a mandate of registration and release of clones / varieties is therefore suggested which may help in resolving this contentious issue of self-evaluation and self-certification.

Dr. Geoffrey Hilton, Nobel prize winner of 2024 and creator of Artificial Intelligence (AI) said that the organizations dealing with AI do not want government control and wish to exercise internal controls and this amounts to self-regulation. He further states that as IPR issues etc., are involved, it is good to have governmental control. Similar way, organizations which are doing R&D on clone / variety development are in a way self-certifying the clone / variety which is questionable. Hence, setting up of an independent body like NBFGR is required to handle Forest Genetic Resources and registration and release clones / varieties.

Most of the outstanding tree species are lost forever in the process of selection or normal felling either in natural forests or in plantations this is genetic erosion. Both Ex-situ and In-situ conservation of germplasm is tried in respect of Teak, Sandalwood etc., species. With regard to Sandalwood, the germplasm so conserved is fallen prey to smuggling and lost. Hence, special methods are required to preserve and conserve the germplasm under NBFGR.

It is felt that multiplication of amenable species by vegetative propagation and its conservation in gene bank, clonal testing and shortlisting superior genotypes can be undertaken by the research institutions. Later, these genotypes are required to be registered with NBFGR for release. Hence, preservation of genotypes in the gene banks by NBFGR will ensure future availability of useful genetic resources and it can be referred as "The India Forest Gene Centre".

For the past 2 decades, both Forest Departments and Industries have not registered clones / varieties developed by them. A farmer in Tamil Nadu developed a Casuarina clone but no one helped him to register it. NBFGR can help such organizations and individuals and facilitate registration and release of clones / varieties.

Alongside efforts to infuse new genetic resources, steps are necessary to stem the tide of degeneration of clonal material leading to the accumulation of 'clonal debris'. Unrestricted perpetuation of inferior material may nullify all positive efforts. Of equal significance is the need to exploit clonal diversity through the identification of superior clones which have greater chances for adaption.

Earlier in MoEF, the matter of registration and release of clones / varieties for forestry tree species and setting up of independent body was discussed. There was a question as to how many new clones / varieties will be developed every year. The answer was around 10 clones / varieties every year may be developed. Such low number of clones / varieties does not warrant formation of independent body. Hence, ICFRE / SFDs / private industries and farmers should be given a task of developing 30 to 50 clones / varieties of different tree species every year. The NBFGR can promote and facilitate this activity.

There is a need to have multiple workshops on this subject to update the present registration and release protocols developed by ICFRE to meet the forestry requirements. Both NBPGR and PPV & FRA to be considered and ICFRE protocol be updated. The outcome in the form of recommendations of the workshop be presented to the central government enabling it to set up an independent body such as NBFGR. NBFGR should have scientists, fields and field staff of their own. The location can be any place with sizable land availability.

Mandate for the NBFGR

The new independent body – NBFGR shall carry out the following functions (Random thoughts):

1. Registration of nurseries producing Quality Planting Material (QPM) for forest trees. Registration should be linked to permission to release a clone so that all nurseries produce QPM of released cones only of that species and region.
2. For forest tree clones, evaluation is done based on growth and productivity (productivity-based path-way) as per ICFRE protocol. While, the registration is done on morphological characteristics (under DUS - trait specific path way). Suitable guidelines under NBPGR and PPV & FRA can be adopted. The base for clones with high productivity at 4 or 5 years shortlisted for cultivation for pulpwood requirements to be considered. However, in the recent past with irrigation and fertilization, the clones are harvested even at 1 year and supplied to WBI (chipboard mills). While releasing or registering such clones early harvest needs to be considered.
3. For registering and release new commercial clones 'Bench Marking' with existing high yielding clones shall be considered.
4. Site/region productivity of clones also to be considered based on multilocation trials and screening the clones.
5. Region and site wise clones shall be registered and released.
6. Periodic publication of a 'Directory of Forest Genetic Resources' based on Plantation journals mentioning the origin of the material shall be considered.
7. Knowledge of genetic migration path is important and proper lineage shall be maintained.
8. Various WBI associations such as IPMA, IPPTA, IARPMA FIPPI etc., can also become part of NBFGR as advisory body.



9. Disease resistance, draught and flood tolerant apart from high productivity are the parameters to be considered for release of clones vis-à-vis popular existing clones.
10. Clones which are derived from natural selection (mass selection) and putative hybrids (like Corymbia spp) and artificial hybrids derived from natural sources cannot be patented. Such clones / varieties shall be registered with an Accession number. The Accession number however will give the identity (IP secured) in favour of the organization / individual who have developed such clones / varieties. Patents can be obtained for clones / varieties originating from protoplast culture, GMO etc., processes.
11. Gene Banks shall be managed through DUS centre of excellence.

Conclusion

The WBI is rapidly expanding creating huge demand for wood while, agroforestry plantations are not matching with the expansion of WBI. Similar way, the R&D of developing clones / varieties, registration and release of clones / varieties is also not matching with the expansion of WBI. Hence, a new blood is to be infused by setting up of NBFGR which will help in rapid progress of registration and release of clones / varieties of forest tree species. India is far behind at least by 30 years in handling Forest Genetic Resources and Tree Improvement and all efforts shall be made to bridge this widening gap. If more new clones / varieties go for plantations for enhanced wood production which will make WBI self-sufficient on raw material front. A 'Brown revolution' through agroforestry therefore is required to make Indian WBI globally competitive. The institutions and scientists adopt, adept considering farmers choice in agroforestry of best commercial clones. Registration and release of clones / varieties by an independent agency such as NBFGR is proposed. Let us not live with helplessness but lay down a successful path-way for future for forestry tree improvement like the excellent example of agricultural crop improvement in India.

Wood Panels as Carbon Sinks: A Strong Case for Carbon Credit Recognition for India's Plywood and Panel Industry



Dr C N Pandey
Senior Technical Advisor (FIPPI)

Introduction

Climate change mitigation strategies across the world are increasingly focusing on carbon sequestration, renewable materials, and low-carbon industrial systems. While considerable attention has been given to afforestation, renewable energy, and emission reduction technologies, the role of harvested wood products as long-term carbon sinks has not received adequate recognition in climate policy frameworks.

The Indian plywood and panel industry represents a unique industrial ecosystem that combines agroforestry, renewable biomass energy, resource efficiency, and long-term carbon storage. Unlike many manufacturing sectors that are primarily emission-intensive, the plywood and panel industry actively contributes to climate change mitigation by storing atmospheric carbon in durable wood products while utilizing renewable plantation resources grown largely on farmland.

Today, nearly 90–95 percent of the raw material requirement of the Indian plywood and panel industry is met through agroforestry and farm forestry plantations comprising species such as poplar, eucalyptus, subabul, casuarina, and other fast-growing plantation timbers. These plantations not only supplement farmers' incomes but also function as important carbon sinks by absorbing atmospheric carbon dioxide during tree growth. When converted into plywood, MDF, HDF, particle board, block board, furniture, flooring, doors, and interior products, a substantial portion of this carbon remains locked within the products for several decades.

The environmental contribution of the wood panel industry therefore extends far beyond conventional manufacturing. It creates a continuous carbon cycle linking agroforestry plantations, renewable raw materials, biomass energy utilization, and long-term carbon storage in value-added products.

Agroforestry as a Carbon Sequestration System

Agroforestry, defined as the integration of trees with crops and livestock systems, is emerging globally as one of the most practical and scalable climate mitigation strategies. India, recognizing its importance, became the first country in the world to adopt a dedicated National Agroforestry Policy in 2014.

Agroforestry systems sequester carbon in multiple forms:

1. Above-ground biomass carbon stored in stems, branches, leaves, and woody biomass.
2. Below-ground carbon stored in roots and soil organic matter through litter decomposition and root turnover.

Unlike annual agricultural crops, trees continue accumulating carbon over several years, making them long-term carbon reservoirs. Fast-growing plantation species used by the plywood and panel industry can absorb significant quantities of atmospheric carbon dioxide during their growth cycle while simultaneously generating economic returns for farmers.

The linkage between agroforestry and the wood panel industry creates an integrated carbon-positive value chain. Trees grown on farmland absorb atmospheric carbon, and after harvesting, much of this carbon continues to remain stored in wood products throughout their service life.

Wood Panels as Long-Term Carbon Reservoirs

Wood is approximately 50 percent carbon by dry weight. When timber is converted into plywood, MDF, HDF, particle board, veneer products, and engineered wood panels, the carbon absorbed during tree growth remains chemically bound within the wood structure.

Unlike fossil fuel-based materials that release additional greenhouse gases during production and use, wood-based panels continue to



store atmospheric carbon throughout their useful life. Depending upon their applications in furniture, housing, interiors, construction, and infrastructure, these products can retain carbon for several decades.

This creates an important extension of the carbon sequestration cycle:

- Trees remove carbon dioxide from the atmosphere.
- Carbon becomes stored in wood biomass.
- Harvested wood products continue storing carbon long after harvesting.
- Sustainable replantation ensures a continuous cycle of carbon absorption and storage.

Thus, the plywood and panel industry simultaneously supports:

- Active atmospheric carbon removal through agroforestry.
- Long-term carbon storage through harvested wood products.

Very few industrial sectors provide such dual environmental benefits.

Renewable Biomass Energy and Circular Bio-economy

At first glance, the plywood and panel industry appears energy intensive due to processes such as veneer drying, hot pressing, resin curing, sanding, and finishing. However, unlike many manufacturing industries dependent on fossil fuels, a substantial portion of the industry's thermal energy requirement is met through renewable biomass fuels.

Wood residues generated during manufacturing — including bark, sawdust, sanding dust, shavings, trimmings, rejected veneers, and wood waste — are extensively utilized as fuel in boilers and thermal oil heaters. Since these biomass fuels originate from sustainably managed agroforestry plantations, their combustion is generally considered carbon neutral.

The industry therefore operates on principles of circular bioeconomy and resource efficiency:

- Almost every portion of harvested wood is utilized.
- Residues are converted into value-added panels or renewable energy.
- Small-diameter timber and processing waste are efficiently consumed by MDF and particle board industries.
- Dependence on fossil fuels is significantly reduced.

This integrated utilization minimizes waste generation while reducing pressure on natural forests and non-renewable resources.

Substitution Benefits of

Wood-Based Panels

An equally important but often overlooked climate benefit of wood-based panels lies in material substitution. Wood products can replace highly carbon-intensive materials such as steel, aluminium, concrete, plastics, and synthetic composites in numerous applications.

International lifecycle assessment studies have consistently demonstrated that substituting wood products for fossil fuel-intensive materials significantly lowers greenhouse gas emissions. Therefore, the climate benefits of wood-based panels include:

- Carbon sequestration during tree growth.
- Long-term carbon storage in products.
- Renewable biomass energy utilization.
- Avoided emissions through material substitution.

This makes the plywood and panel industry an important contributor to low-carbon economic development.

Factors for Conversion from Product Volume to Carbon Storage

Product	Density (t/m³)	Carbon Fraction	Carbon Factor (t-C/m³)
Sawn Timber	0.45	0.50	0.225
Plywood	0.60	0.50	0.300
MDF / Particle Board	0.70	0.45	0.315

Source: Adapted from methodologies for harvested wood products carbon accounting (J. Wood Science, 2010, 56:339–344).

Estimated Carbon Storage in Indian Wood Panel Production

The carbon storage potential of harvested wood products can be estimated using internationally accepted conversion factors.

Based on estimated Indian production during 2025–26:

- **Plywood**: 12 million m³
- **MDF:** 4 million m³
- **Particle Board:** 4 million m³
  Estimated annual carbon storage:
- **Plywood:** 12 million m³ × 0.300 t-C/m³ = 3.60 million tonnes carbon
- **MDF:** 4 million m³ × 0.315 t-C/m³ = 1.26 million tonnes carbon
- **Particle Board:** 4 million m³ × 0.315 t-C/m³ = 1.26 million tonnes carbon

Total Carbon Stored

Total carbon stored = 6.12 million tonnes of carbon (t-C)

Converting carbon into carbon dioxide equivalent:

6.12 × 3.67 = 22.46 million tonnes CO_2 equivalent

This demonstrates that the Indian plywood and panel industry annually stores approximately 22.46 million tonnes of atmospheric CO_2 equivalent in harvested wood products.



Conclusion

At a time when India is pursuing ambitious climate commitments and long-term net-zero targets, recognizing the carbon storage and environmental benefits of harvested wood products is both scientifically justified and economically necessary. Carbon credit recognition for the plywood and panel industry would not only reward sustainable industrial practices but also strengthen agroforestry, rural livelihoods, renewable resource utilization, and India's broader climate change mitigation strategy.

BEYOND Na-PCP
Searching for Safer Alternatives for Fungal Protection of Engineered Wood

A research roadmap for developing effective, resin-compatible and sustainable antifungal technologies for MDF and engineered wood products



Dr. Purushottam Sharma
Head R&D, Greenpanel Industries Ltd.

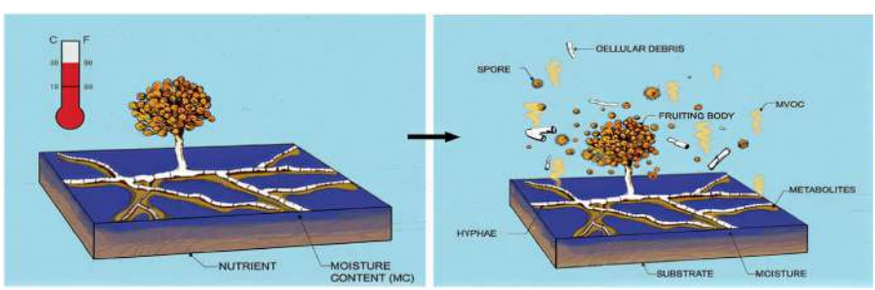


The engineered-wood industry is moving toward a new generation of fungal-protection technologies. The objective is not to declare a single replacement for sodium pentachlorophenate (Na-PCP/SPCP), but to identify, evaluate and industrially validate safer alternatives that can deliver reliable protection without compromising resin chemistry, panel performance, manufacturing efficiency or environmental responsibility.

The Search for a Better Preservation Technology

Engineered wood has transformed modern construction and interiors. MDF, HDF, pre-laminated panels, flooring and other wood-based products provide consistency, design flexibility and efficient use of wood resources. Yet moisture and humidity can create conditions favourable for fungal colonisation, making biological durability an important technical and manufacturing challenge.

Historically, sodium pentachlorophenate (Na-PCP/SPCP) has been used as an effective fungicidal treatment. However, concerns associated with pentachlorophenol chemistry, worker exposure, environmental impact and regulatory acceptance have created a clear need to investigate safer alternatives. The challenge is therefore not simply chemical substitution; it is the development of a complete, reliable preservation system.



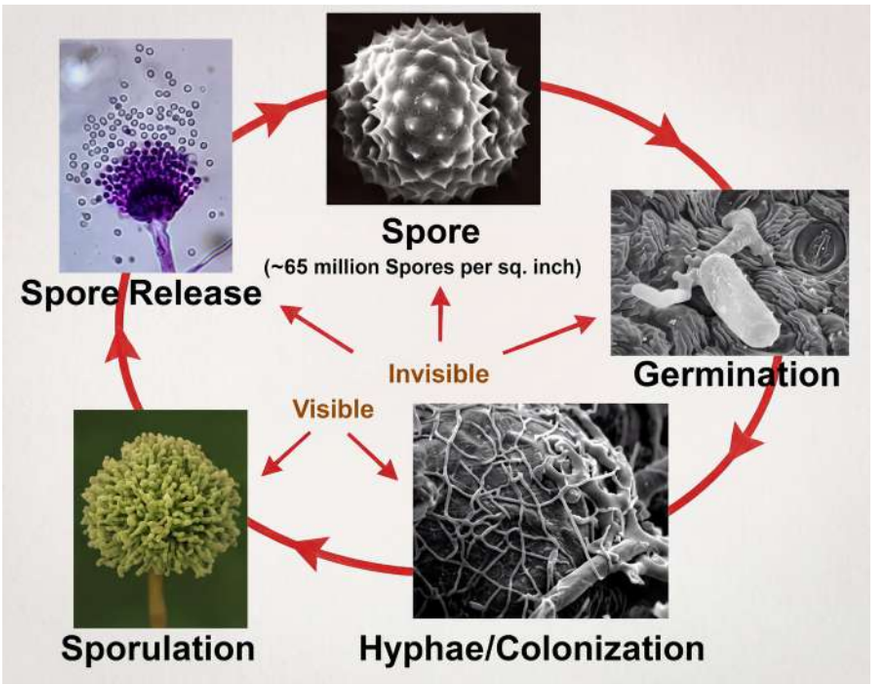
What Should an Alternative Achieve?

A successful alternative must satisfy several requirements simultaneously. It should provide broad antifungal efficacy while maintaining a favourable human-health and environmental profile. It should exhibit acceptable storage and process stability, low unwanted leaching and compatibility with the resin systems used in engineered wood manufacture.

For MDF, compatibility is particularly important. Any candidate must be evaluated for its effect on resin stability, pH, gel time, curing, fibre wetting, hot pressing, formaldehyde emissions and final board properties. Mechanical performance—including internal bond strength, MOR and MOE—as well as thickness swelling, water absorption and surface quality must remain within acceptable limits.

The Alternatives Under Investigation

The research direction includes several technology families rather than one predetermined chemical. Plant-



derived antifungal compounds such as essential oils, phenolics, flavonoids, tannins, terpenoids and alkaloids are potential candidate groups. Materials derived from neem, eucalyptus, clove, cinnamon, tea tree and other botanical sources may offer useful bioactive chemistry.

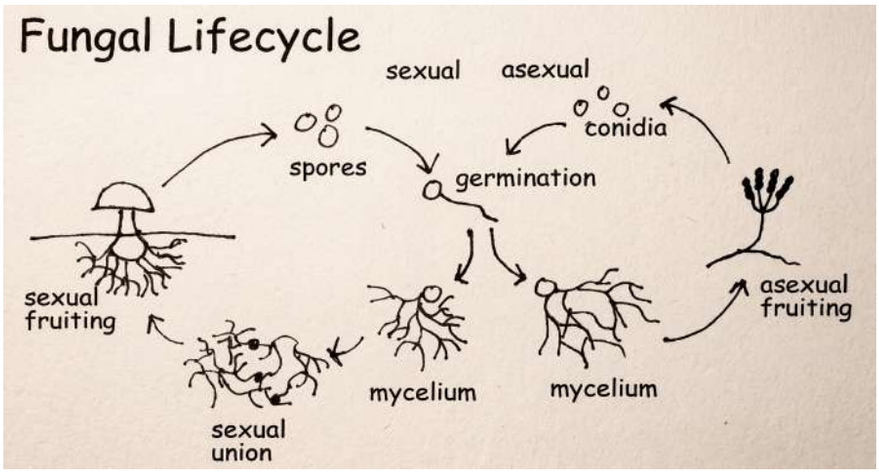
Other possibilities include multi-component systems combining botanical extracts with inorganic agents, essential oils with low-dose organic biocides, bioactive compounds with controlled-release mechanisms, and organic–inorganic synergistic formulations. Surface protection combined with internal protection is another potential pathway.

Importantly, natural origin alone does not establish suitability. Every candidate must undergo systematic testing for efficacy, safety, compatibility, durability, manufacturing performance, cost and scalability.

From Laboratory Screening to Mdf Manufacturing

The development pathway should begin with candidate discovery and laboratory screening, followed by controlled fungal-efficacy testing. Promising candidates can then move into engineered-wood compatibility studies, where their interaction with resin systems and panel manufacturing conditions is examined.

The next stage is durability and environmental validation, including fungal resistance, leaching behaviour and broader safety considerations. Only after these stages should promising systems proceed to pilot and industrial demonstration. This staged approach reduces the risk of selecting a laboratory-effective chemical that fails during real MDF production.



The Resin-Preservative Interface

One of the most important aspects of the research is the interaction between preservative chemistry and the adhesive system. A candidate may show excellent antifungal activity yet become unsuitable if it changes resin curing, gel time, viscosity, fibre coating or hot-press behaviour.

The future preservation system therefore needs to be designed alongside resin and panel technology. The preservative and the resin must work together to provide fungal protection without sacrificing strength, dimensional stability, surface quality or manufacturing efficiency.

A Standardised Way to Compare Candidates

A proposed Na-PCP Replacement Index (NPRI) can provide a structured framework for comparing candidate technologies. Rather than judging a replacement only by fungal kill or mould resistance, the assessment should combine biological efficacy with human safety, environmental profile, leaching, resin compatibility, panel performance, dimensional stability, process compatibility, cost, raw-material availability and regulatory readiness.

This changes the central question from 'Does the chemical control fungus?' to 'Can the complete technology safely and reliably protect an engineered wood product throughout manufacturing and service?'

India's Opportunity

India has a strong opportunity to contribute to this transition through its engineered-wood industry, chemical manufacturing capability, research institutions and availability of plant-derived resources. Collaboration among panel manufacturers, chemical companies, universities, forestry and wood-science institutions, testing laboratories and standards organisations can accelerate the development of indigenous preservation technologies.

A coordinated Industry–Government–Research programme could support shared testing infrastructure, standardised evaluation methods, pilot-scale trials, regulatory pathways and development of future national standards.

Magazine Feature | Safer Fungal Protection for Engineered Wood

A Platform, Not a Single Chemical

The most important message is that the search for a Na-PCP alternative should not be reduced to finding another single fungicide. The long-term objective should be a safer preservation technology platform integrating chemistry, biology, resin science, manufacturing control and durability testing.

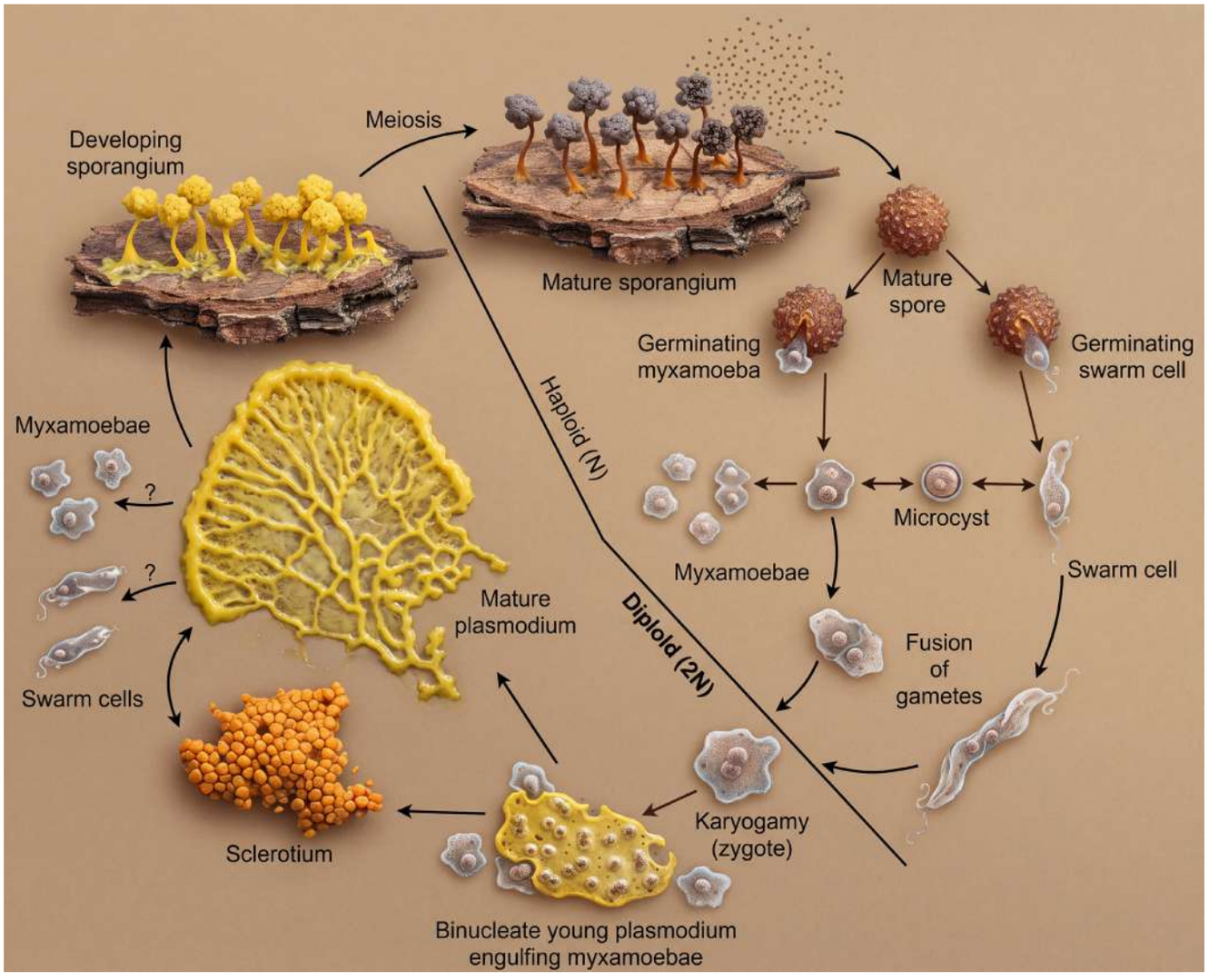
The successful solution will need to be effective against relevant fungal challenges, compatible with MDF production, economically viable and responsible from a human-health and environmental perspective.

The Road Ahead

The transition away from legacy preservatives creates both a challenge and an opportunity. Rather than waiting for regulatory pressure to force substitution, the engineered-wood sector can proactively develop technologies that combine durability with safer chemistry and sustainable manufacturing.

The goal is not to claim that one replacement has already been found. The goal is to build the scientific and industrial pathway through which the right alternative—or combination of alternatives—can be identified, validated and scaled.

BEYOND Na-PCP LIES THE OPPORTUNITY TO REDEFINE FUNGAL PROTECTION FOR ENGINEERED WOOD.



How Will the Furniture Factory of Tomorrow Buy Panels?



Deepak Gupta
Managing Editor,
Kitchen & Cabinetry Intelligence

For panel manufacturers, the furniture industry has traditionally been a market to be supplied: build distribution, maintain stocks, develop the right products and finishes, and make them available wherever furniture is being made. That market is beginning to change. Panel procurement in furniture manufacturing is increasingly becoming part of a system in which specifications, production planning, inventories and delivery commitments are more tightly controlled.

Kirit Joshi, Founder and Managing Director of Spacewood Furnishers, brought this issue into sharp focus at India Kitchen Congress 2026. Drawing on three decades of building an industrial furniture business, he argued that India cannot expect to scale furniture manufacturing while continuing to multiply the number of materials being handled at the backend. The industry, he said, needs to move "from fragmentation to standardisation — if not size, definitely in materials."

The implications go beyond manufacturing efficiency. If larger furniture companies begin deciding which substrates, specifications and internal components will be used in their products, the route by which a panel gets into furniture also changes. Distribution will remain important, but getting a product specified by the furniture company itself could become increasingly valuable.

Scale Needs Fewer Variables

Joshi's argument starts with a contradiction familiar to the modular furniture industry. Customers expect choice, but not every choice creates customer value. Offering multiple substrates, colours and material combinations for parts of a kitchen or wardrobe that the customer barely sees adds complexity to procurement, inventory and manufacturing without necessarily improving the finished product.

He points to international furniture manufacturers that standardise carcass materials and internal hardware while allowing much greater freedom in customer-facing elements. Indian manufacturers, he believes, will eventually have to make similar choices: retain variety where design matters, but reduce unnecessary variation behind the shutter.

This changes the relationship with the panel supplier. Instead of supplying whatever board happens to be ordered for a particular project, the opportunity is to become part of the furniture manufacturer's product architecture. Once a substrate, thickness or board specification becomes the default across a range of products, volumes can be concentrated and procurement becomes easier to plan. But before a material becomes a default, someone has to decide that it deserves to be there.

From Choice to Specification

Gopal Dwivedi, Chief Design Officer–Global at Livspace, sees that decision beginning much earlier than sourcing. A material may first attract attention because of a design trend, customer requirement or new technology. But before it can enter the Livspace catalogue, it has to make sense as a design proposition, perform reliably as a material and be capable of being delivered consistently at scale.

The central design team works with category and procurement teams to evaluate potential materials. Once a product looks promising, Livspace does not move directly from sample to catalogue. It goes through prototyping, pilot manufacturing and quality evaluation, typically followed by a controlled city-level introduction. That allows the company to see how designers specify the material, how customers respond to it, how factories process it and whether the intended result can be reproduced.

There is an important distinction here between selecting an attractive material and building a scalable product around it. For a panel or surface company seeking business from a large interiors platform, a good sample may therefore be only the beginning.

Consistency becomes particularly important because Livspace works through multiple third-party manufacturing partners. The manufacturing location may change, but the material specification and process discipline do not. For important materials, Livspace itself sources the approved raw material and provides it to manufacturing partners, while defining the processes to be followed and maintaining quality teams on the shop floor.

The catalogue consequently becomes more than a design tool. Once a finish is offered to a customer, Livspace has effectively made a commitment that the material will be available when the order reaches manufacturing, in the required geography and quantity, and to the same specification. More choice is therefore not automatically better choice; the catalogue has to remain executable.

This gives panel manufacturers an indication of how panel procurement in furniture manufacturing may evolve as the industry becomes more organised. The design team may open the door, but the product ultimately has to survive manufacturing, sourcing and supply.

From Specification to Reliable Supply

If Dwivedi explains how a material earns its place in the product catalogue, Shilpa Gupta, Chief Supply Chain Officer at HomeLane and DesignCafe, provides a view of what happens once materials enter a large operating system.

HomeLane's manufacturing model is unusual. Its factories are funded by manufacturing partners and dedicated to HomeLane, while the company plays a significant role in determining machinery and production specifications. Procurement and sourcing of materials remain with HomeLane, its ERP operates in the factories, and its teams control incoming material quality. Between HomeLane and DesignCafe, Gupta says the business currently consumes close to 55,000 boards a month.

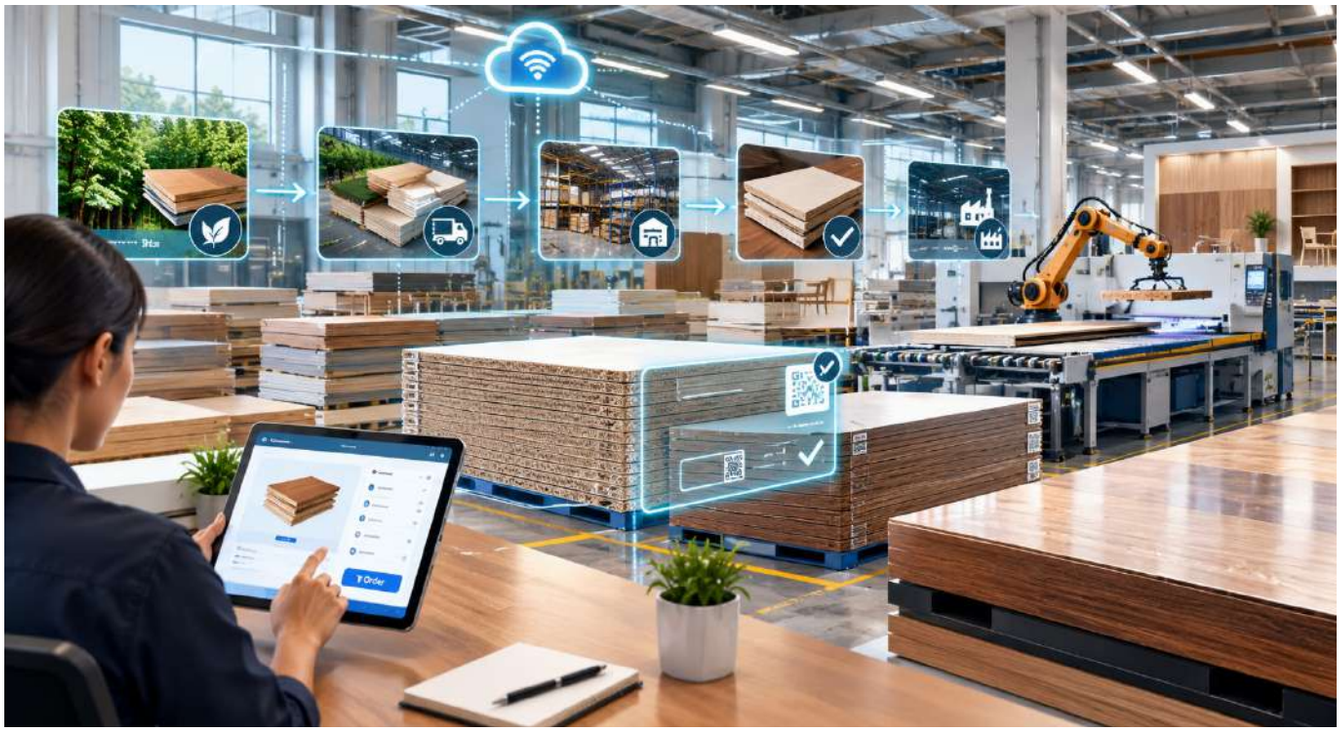
For panels, supplier approval begins with the technical specification. HomeLane deals directly with manufacturers, examines the composition and construction of products such as plywood and engineered boards, and visits the supplier's factory before onboarding. Its team examines manufacturing processes, quality checks and raw materials, after which samples are independently tested against applicable technical standards.

The board must then survive the furniture factory. HomeLane presses it, cuts it and edge-bands it to see whether it performs as expected. Pricing comes after these technical and manufacturing checks. Even after approval, incoming shipments are sampled and independent laboratory testing continues periodically.

For a panel manufacturer accustomed to selling through the market, this is a different kind of sale. The material is not merely being bought against a price list. It is being qualified as an input into a production system.

Approval, however, does not guarantee continuing business. Gupta describes service as one of the factors that can make or break a supplier's position. HomeLane gives customers delivery commitments while keeping inventories relatively lean, with much of its procurement operating on just-in-time principles. The supplier's distribution capability, replenishment discipline and responsiveness therefore become part of the product being bought.

There is also a difference between core materials and visible finishes. HomeLane can work with different plywood or MDF suppliers in different regions because the customer does not see the substrate, and transporting bulky boards over long distances may make little economic sense. Decorative finishes are another matter. A laminate shown to a customer in Bengaluru cannot routinely disappear from the catalogue in Kolkata because the supplier cannot service that market. Visible finishes therefore require much



wider and more consistent availability.

Again, this is close to Joshi's argument about standardising what sits behind the design while retaining choice where the customer values it. The difference is that Gupta reaches the issue through procurement and logistics rather than manufacturing philosophy.

When Stock Information Becomes Production Information

Availability is not simply a matter of keeping more material in warehouses. Gupta sees a larger weakness in the way information moves between furniture companies, manufacturers and distributors.

HomeLane currently asks suppliers every Monday for the stock available at their depots so that it can compare this with forecast consumption. Yet she cites instances where HomeLane can remain out of stock of an SKU for 20 days without that item entering the supplier's next production cycle. The disconnect can lie between actual consumption, distributor inventory, production scheduling and the purchase orders already waiting to be serviced.

Part of the problem, according to Gupta, is the maturity of forecasting, replenishment and ERP systems across the industry. The furniture company knows what it is consuming and what orders are coming. The panel manufacturer knows what it is producing. The distributor knows what is physically available. But these pieces of information do not necessarily meet in time.

HomeLane is attempting to improve this through a vendor-facing digital system that allows suppliers to see projections and incoming demand, share stock positions and track material supplied, received and rejected. Gupta says supplier adoption is still a work in progress. Her larger point is that both sides need greater visibility into each other's data if they want to anticipate shortages rather than discover them after production has been affected.

This does not necessarily favour only the largest panel companies. Gupta says some large manufacturers remain weak in data and technology systems, while smaller suppliers can perform well with relatively simple systems suited to their scale. The differentiator is often how system- and data-driven the organisation is, and how willing it is to share information.

That suggests another dimension to supplier capability. Investment in manufacturing capacity and distribution will remain fundamental, but the ability to provide useful inventory and production information may increasingly matter to organised furniture customers as well. In that sense, panel procurement in furniture manufacturing is beginning to involve information flow alongside material flow.

Bespoke Furniture Has a Different Problem

Standardisation is one route to predictability. It does not work equally well for every furniture business.

Nikhil Kumar, co-founder of design software company Infurnia, is approaching the problem from the bespoke end of the market through a new manufacturing platform called Belmetio. Rather than turning customised furniture into a fixed catalogue, the model attempts to make the process around each individual project more predictable.

Once a design is completed, it goes through production detailing in which cut lists, CAM operations and the bill of materials—including core materials, finishes, edge bands and hardware—are frozen. Belmetio's stated ambition is to procure the required materials, process the panels, conduct quality checks and deliver the furniture within seven days of the production design being frozen. Kumar says Belmetio's first project has exposed several inefficiencies in the conventional design-to-build process that the platform is set to optimise.

One of those inefficiencies is revealing. Kumar says the actual factory processing of a project can take around three days when the production process is properly organised. Procurement is much less predictable. A specified material may be available immediately, take several days to arrive, or require a much longer wait for replenishment. In a project involving several finishes, edge bands and other inputs, one missing item can hold up the entire job.

Kumar is therefore exploring a city-level manufacturing and supply model, beginning in Bengaluru. He also envisages bringing supplier catalogues into the Infurnia environment and using material-use data to provide better indications of what is being specified in different cities. Over time, such systems raise an interesting possibility: material availability could begin influencing the design and specification process before the bill of materials is frozen, rather than becoming a problem afterwards.

Spacewood and Belmetio are solving very different problems. Joshi wants to reduce material variability so furniture can be produced efficiently at scale. Kumar has to accommodate variability because each project may be different. What both require from the material supply chain is greater predictability.

Where Should the Surface Be Created?

There is another change taking place alongside specification and procurement. The India Interior Trend Report 2026–27 (IITR) has been examining whether furniture factories need to undertake as much board preparation and surface processing themselves as they traditionally have.

Its recent analysis, From Board to Surface System, argues that the familiar prelam-versus-postlam

debate is becoming too narrow. With laminates, PET, acrylic, synchronised surfaces, membrane, veneer and other technologies creating an expanding range of finishes, the more useful question is where in the value chain the finished surface should be created.

Dwivedi arrives at a similar conclusion from Livspace's product-development experience. Some newer finishes require specialised machinery, controlled processing conditions and technical expertise that may not be practical for every furniture manufacturer to replicate. In such cases, he believes it makes sense for more value addition to take place upstream, with the panel or surface producer supplying something closer to a manufacturing-ready product.

That does not mean post-laminated construction disappears. Decorative laminate has a large established processing ecosystem in India and retains considerable flexibility. The likely direction is therefore a more intelligent division of manufacturing: processes demanding specialised technology and industrial consistency can move upstream, while those where customisation and flexibility matter can remain closer to furniture production.

Gupta's experience at HomeLane adds an important qualification. Prelaminated board can reduce pressing time and cost, but it also converts a board in a particular décor into semi-finished inventory. For a custom-interiors company dealing with a large palette of shades, a slow-moving prelaminated décor cannot easily be repurposed. HomeLane therefore continues to buy many finishes on a just-in-time basis and press them when required.

The company has explored pre-producing panels in standard dimensions, but the approach has not worked sufficiently well for its custom-interiors business. Gupta would like to see more standard components that could eventually be produced



in advance and assembled almost like LEGO pieces, but variations in dimensions and the realities of Indian sites still limit how far this can go.

This is why moving value upstream cannot be treated as an automatic progression. It makes sense when a specialist can remove variability or a difficult manufacturing process without creating excessive inventory rigidity further down the chain.

Beyond Selling the Board

These developments do not point towards a single model for panel procurement in furniture manufacturing. An industrial manufacturer may narrow its material palette and concentrate substantial volumes around a few approved specifications. A national interiors platform may expect a material to survive design validation, manufacturing trials and multi-city supply before it becomes part of its catalogue. A custom-interiors business may require greater flexibility and just-in-time availability. A distributed bespoke manufacturing network may need a specific combination of materials to be assembled locally for one project.

Even the same panel manufacturer may have to serve these customers differently. Dwivedi believes there is room for material suppliers to move beyond the individual sheet towards more complete manufacturing-ready systems—coordinated surfaces and edges, ready-to-process panels, technical documentation, digital design information, application support and training. His point is not simply to transfer more work upstream, but to place a process where it can be carried out most consistently.

The common thread running through these different models is predictability. The furniture manufacturer wants to know that the material it has designed around will perform as specified, machine consistently, remain available, arrive when required and continue to be supported after it has entered the catalogue.

Getting specified may therefore become as important as getting distributed. But specification alone will not be enough. Once a material enters an organised furniture system, its continued place there will depend increasingly on the supplier's ability to support that system with consistent quality, supply and information.

The panel industry has spent decades making material available in the market. The next phase may require something more demanding: making the right panel ready for manufacturing.

FIPPI Request for Transfer of IS 2202 and IS 2191 Standards from CED 11 to CED 20

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

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FIPPI/16/3-8-2026 21 July 2026

To,
The Director General
Bureau of Indian Standards (BIS)
Manak Bhawan, New Delhi

Subject: Request for Transfer of IS 2202 and IS 2191 Standards (Wooden Flush Door Shutters) from CED 11 to CED 20 to get Balanced & Adequate Representation of the Manufacturing Industry

Respected Sir,

The Federation of Indian Plywood and Panel Industry (FIPPI) respectfully submits this representation regarding the ongoing revision of IS 2202 (Wooden Flush Door Shutters – Specification) under the CED 11 Committee.

At the outset, we wish to place on record our sincere appreciation for the proactive role played by BIS in continuously modernizing Indian Standards through a transparent and consultative process involving all stakeholders.

FIPPI represents a large cross-section of the Indian plywood and panel industry, comprising predominantly MSMEs as well as large manufacturers. The plywood industry is the principal manufacturer of wooden flush door shutters in the country, and it is estimated that nearly 80% of the total production of wooden flush doors is carried out by plywood manufacturing units because of adequate availability of veneers, wooden frame and battens, resins and hot presses. Consequently, the technical expertise, manufacturing experience, and practical implementation issues associated with these products primarily reside within the plywood and panel industry.

Over the years, FIPPI has actively contributed to the formulation and revision of several standards under CED 20 (Wood and Other Lignocellulosic Products). The collaborative approach adopted by BIS and CED 20 has resulted in technically sound, practical, and industry-oriented standards that have significantly facilitated implementation of Quality Control Orders (QCOs) while maintaining product quality and consumer confidence.

However, we are concerned that the plywood and flush door shutters manufacturing industry is not receiving adequate representation in the Working Committee currently revising IS 2202 under CED 11. As a result of the inadequate representation of the manufacturing industry in the revision process of IS 2202, the standard revision has remained pending for more than one and a half years and many practical manufacturing, testing, certification, and implementation issues experienced by manufacturers are not being sufficiently reflected during the revision process. Delay in finalizing the standard has created significant difficulties for the industry. The Quality Control Order (QCO) for plywood and wooden flush door shutters became applicable to small enterprises on 28th May 2025 and for micro enterprises on 28th August 2025. Since its implementation,

many MSME manufacturers have been facing significant challenges in achieving compliance, particularly due to the absence of a finalized revised standard and the resulting difficulties in certification. Many of these practical issues continue to remain unresolved, underscoring the need for greater participation of the manufacturing industry in the standard revision process.

Since wooden flush door shutters are fundamentally wood-based engineered products manufactured predominantly by the plywood industry, it would be technically appropriate for the industry's representatives to participate actively in the formulation and revision of these standards. Their practical experience would help ensure that the revised standard is technically robust, aligned with current manufacturing technologies, implementable by industry, and supportive of the objectives of the Quality Control Order.

In view of the above, we respectfully request BIS to kindly consider the following:

1. Include FIPPI as a member of the Working Committee presently engaged in the revision of IS 2202 so that the views and technical expertise of the manufacturing industry are adequately represented during the revision process.

2. Review the allocation of IS 2202 and IS 2191 with a view to considering their placement under CED 20 (Wood and Other Lignocellulosic Products), alongside other wood-based panel products and related standards. Such an arrangement would provide greater technical synergy and ensure holistic consideration of raw materials, manufacturing processes, product performance, testing, and certification requirements.

FIPPI's participation will strengthen the development of comprehensive, technically sound, and industry-aligned standards, particularly in relation to wood-based products, engineered panels, and value-added applications such as wooden flush door shutters. This will ultimately benefit manufacturers, consumers, certification bodies, regulators, and the nation by facilitating effective implementation of quality standards.

We sincerely request your kind intervention in this matter and look forward to your favourable consideration. FIPPI remains committed to extending its full technical support to BIS in the formulation of robust, practical, and internationally harmonized Indian Standards.

Thanking you.

Yours faithfully,



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Response to suggestion received from Russian Federation

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

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FIPPI/16/3-9/2026 August 5, 2026

To,
Shri Nishikant Singh
Scientist-D/Joint Director
Member Secretary
Civil Engineering Department
Bureau of Indian Standards
Manak Bhawan, 9 Bahadur Shah Zafar Marg
New Delhi-110002

Subject: FIPPI Response on Preservative Treatment Requirements and Bending Test Provisions under Indian Standards

Dear Sir,

The Federation of Indian Plywood and Panel Industry (FIPPI) acknowledges with appreciation the comments and suggestions received from the Russian Federation regarding the provisions of **IS 303 (Plywood for General Purposes) and IS 4990 (Shuttering Plywood).**

After careful examination of the observations, FIPPI submits the following technical comments for consideration by the Bureau of Indian Standards (BIS).

1. Preservative Treatment Requirements

(IS 303: Clause 7.1.1 and IS 4990: Clauses 6.4 & 6.6)

FIPPI does not support any general relaxation in the mandatory preservative treatment requirements specified in the Indian Standards for plywood manufactured from non-durable timber species and the sapwood of all timber species.

India experiences predominantly tropical and subtropical climatic conditions characterized by high temperature, high relative humidity, seasonal rainfall, and intense biological activity. These environmental conditions are highly favourable for the growth of decay fungi and for infestation by termites, borers, beetles, and other wood-destroying organisms. Consequently, untreated or inadequately treated wood and wood-based panel products are highly susceptible to rapid deterioration during service.

The natural durability of timber varies considerably from species to species and even within different portions of the same tree. While a few timber species possess moderate to high natural durability, the majority of plantation-grown species and the sapwood of almost all commercial species used by the Indian plywood industry are classified as non-durable or moderately durable. Therefore, preservative treatment is essential to achieve the required service life and durability of plywood products under Indian exposure conditions.

The present BIS requirements are not arbitrary. They are based on several decades of scientific research, laboratory investigations, field exposure trials, and service performance studies carried out by premier national research institutions, particularly i)Forest

Research Institute (FRI), Dehradun ii)Institute of Wood Science and Technology (IWST), Bengaluru; and these organisations have generated extensive experimental data on:

Natural durability classification of Indian and imported timber species;

Treatability of different wood species;

Penetration and retention characteristics of preservatives;

Efficacy of various preservative chemicals;

Optimum preservative retention levels for different hazard classes; and

Long-term field performance under Indian climatic conditions.

Based on these comprehensive scientific investigations, BIS has prescribed suitable preservative systems, treatment methods, and minimum preservative retention requirements for wood, veneers, and plywood to ensure adequate biological durability and satisfactory service performance.

The mandatory preservative treatment provisions incorporated in Indian Standards therefore serve the following important objectives:

- protection against termites, borers and decay fungi;
- enhancement of service life of plywood products;
- improved consumer safety and confidence;
- conservation of forest resources through longer product life; and
- promotion of sustainability by reducing replacement frequency and resource consumption.

Any reduction in preservative dosage or exemption from treatment without adequate scientific justification may adversely affect product durability and compromise long-term performance under Indian service conditions.

Provision under IS 303

FIPPI wishes to clarify that **IS 303 already provides adequate flexibility.**

Preservative treatment is mandatory for all grades of plywood (MR, BWR and BWP) manufactured from non-durable timber species and the sapwood of all timber species.

Further, Clause 7.1.1.3 of the latest edition of IS 303 already permits flexibility for BWR and BWP grade plywood by allowing the use of any approved preservative treatment system, subject to mutual agreement between the manufacturer and purchaser.

Thus, the existing standard provides sufficient flexibility while continuing to ensure adequate biological protection.

Imported Timber Species including Russian Timber

With specific reference to timber species imported from the Russian Federation, FIPPI wishes to state that any exemption from preservative treatment or modification in treatment requirements can only be considered after establishing the durability and treatability characteristics of such species under Indian conditions.

Natural durability data generated under climatic conditions different from those prevailing in India cannot automatically be adopted for Indian applications.

Accordingly, if exemption from preservative treatment is proposed for any imported timber species, comprehensive scientific evidence should first be generated through recognised Indian research organisations or other competent institutions recognised by BIS, with regards to ; natural durability evaluation; preservative treatability studies; laboratory biological resistance tests; field performance trials under Indian exposure conditions; and service life assessment.

Only after satisfactory evaluation and acceptance of such technical evidence by the concerned BIS Technical Committee should any modification in preservative treatment requirements is considered.

Requirement under Quality Control Orders (QCO)

It is also important to note that, following the implementation of the Quality Control Orders (QCOs) for plywood and wood-based panel products, compliance with the applicable BIS Standards has become mandatory for manufacture, import, sale and distribution in India.

Accordingly, any deviation from the provisions of the relevant Indian Standards—including preservative treatment requirements—must be supported by adequate scientific research, validated experimental data and technical evidence acceptable to BIS. In the absence of such evidence and formal approval through the BIS standards development process, deviations cannot be accepted for products covered under the QCO framework.

This approach ensures uniform product quality, consumer protection, fair trade practices and regulatory compliance across both domestic and imported products.

IS 4990 (Shuttering Plywood)

With regard to IS 4990, FIPPI notes that the BIS CED 20 Committee, after detailed deliberations and obtaining concurrence from the user groups, has already approved the provision permitting preservative-treatment-free shuttering plywood intended exclusively for one-time use.

The corresponding amendment has been approved by the Chairman and Members of the BIS CED 20 Committee and is expected to be notified by BIS shortly.

Accordingly, this issue has already been addressed through the established BIS consensus process.

2. Alternative Bending Test Methods

(IS 303: Clause 11.5 and IS 4990: Clause 10.9)

FIPPI does not support the proposal to permit alternative test methods for establishing correlation with bending strength and stiffness.

The bending test methods presently specified in IS 303 and IS 4990 have been in use for several decades and have been scientifically validated through extensive laboratory testing, product certification, industrial practice and field performance. These methods provide reliable, reproducible and internationally acceptable assessment of the structural performance of plywood.

Introducing alternative test methods without adequate validation may create inconsistencies in product evaluation, certification and regulatory compliance.

If the Russian Federation has developed any scientifically validated alternative testing methodology, FIPPI would welcome its technical evaluation. The concerned authorities may kindly submit the same for consideration by the BIS Technical Committee. The BIS Technical Committee may examine such evidence objectively and take an appropriate decision based on scientific merit.

Until such comprehensive technical evidence is submitted, evaluated and accepted by BIS, FIPPI recommends that the existing bending test provisions in IS 303 and IS 4990 should remain unchanged.

With Regards,



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Submission of Details regarding the Annual Consumption of Technical Grade Urea

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

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FIPPI/DPIIT/2026-27/20 21 August 2026

To,
Shri Mohd Isharar Ali
Director
Department for Promotion of Industry and Internal Trade (DPIIT)
Vanijya Bhawan, New Delhi – 110001

Subject: Submission of Details regarding the Annual Consumption of Technical Grade Urea

Respected Sir,

With reference to your communication seeking details regarding the annual consumption of technical-grade urea in the wood panel industry, the Federation of Indian Plywood and Panel Industry (FIPPI) respectfully submits the following information for your kind consideration and record:

With reference to our earlier submission vide Letter no. FIPPI/DPIIT/2026-27/01 dated 23 April 2026, the total annual demand for TGU was estimated to be approximately 5.12 lakh metric tonnes. This estimate includes total urea consumption, based on the present production capacity, including the resin consumption of the MDF and particle board industry. The break-up is as follows:

Sl. No.	Products	Present Production Capacity (in Million CBM)	Basis	UF resin consumption (in Ton)	Urea (Ratio of Urea in UF Resin)	In house Urea consumption in ton
1.	Plywood	Total production 12 CBM, out of which 60 pct is made with UF resin i.e. 7.2	72 kg liquid UF resin per CBM Plywood	5,18,400	0.285	1,47,744

Estimated Technical Urea in Resin

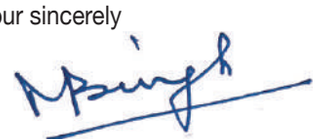
Sl. No.	Products	Present Production Capacity (in Million CBM)	Basis	UF resin consumption (in Ton)	Urea (Ratio of Urea in UF Resin)	In house Urea consumption in ton
2.	MDF	4.0	138 kg Liquid UF resin per CBM MDF keeping density 750 kg/m3	5,52,000	0.33	1,82,160
3.	PB	4.0	138 kg Liquid UF resin per CBM MDF keeping density 750 kg/m3	5,52,000	0.33	1,82,160

It is important to highlight that most MDF and particle board manufacturers procure ready-made resin from independent resin manufacturers rather than manufacturing resin themselves.

This is submitted for your kind consideration and records.

Thanking You,

Your sincerely



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Request for investigation FMCS

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FIPPI/16/3-10-2026 02 September 2026

To,
Shri Sanjay Garg, IAS
Director General
Bureau of Indian Standards (BIS)
9, Bahadur Shah Zafar Marg, New Delhi, Delhi 110002

Subject: Request for Investigation into Non-Compliance by Foreign BIS Licence Holders under the Quality Control Order for Plywood and Wood-Based Boards

Reference: FIPPI's earlier representations vide Letter Nos. FIPPI/18A-2025 dated June 13, 2025; FIPPI/16-3-2025 dated June 26, 2025; FIPPI/18B-2025 dated August 7, 2025; and FIPPI/18C-2025 dated September 4, 2025.

Respected Sir,

Through this letter, we wish to express our deep appreciation for the significant initiative undertaken by our Honourable Prime Minister to strengthen the Indian industrial sector and economy under the "Make in India" mission, and we pledge our trade's full support for this endeavour. A crucial step taken by the Government of India in this direction is the "Quality Control Order." This measure will restrict the easy entry into the Indian market of various sub-standard products that were previously imported in large quantities, despite the country possessing fully developed manufacturing capabilities and technology for them. The implementation of the Quality Control Order for various products has undoubtedly infused new energy into the Indian manufacturing industry. Furthermore, the role of the Bureau of Indian Standards (BIS) as an intermediary has ensured the supply of high-quality goods to consumers.

With reference to the representations cited above, FIPPI has, on several occasions, highlighted the continued import of non-BIS-compliant plywood and panel products into the Indian market even after the implementation of the Quality Control Orders (QCOs), and has sought appropriate enforcement of the applicable requirements from your esteemed office.

We would further like to share our observations regarding the certification being issued by the Bureau of Indian Standards under the Quality Control Order in following 2 categories:

1. Non-compliance with regulations by foreign license holders.

2. Non-compliance with regulations by the Indian representatives of foreign license holders.

1. Non-compliance with Bureau regulations by foreign license holders:

While the implementation of the QCOs has contributed to a moderation in imports of plywood, MDF and particle board, there has been a significant increase in the number of foreign manufacturers obtaining BIS licences for these products. the number of foreign manufacturers holding BIS licences is as follows:

- **Plywood: 57 foreign manufacturers** — Nepal (50), Vietnam (3), Russia (2), Indonesia (1) and Malaysia (1).
- **MDF: 13 foreign manufacturers** — Vietnam (5), Thailand (4), New Zealand (2), Indonesia (1) and Malaysia (1).
- **Particle Board: 8 foreign manufacturers** — Thailand (3), Bhutan (1), Malaysia (1), Nepal (1), Sri Lanka (1) and Türkiye (1).

This indicates a growing number of overseas manufacturers entering or seeking access to the Indian market through the BIS certification framework.

However, data indicates that several foreign license holders have exported quantities to India that far exceed their installed capacity. It is reasonable to assume that if a manufacturer has a total monthly capacity of 30 containers, even under optimal conditions and with significant production improvements, they might produce an additional 10–20 percent of material for a company with a 30-container capacity, this will amount to a maximum of 36 containers. However, over the past year, several companies have exported quantities to India far exceeding the declared limits (data sheet enclosed).

This indicates that, by adopting unethical business practices, these companies either outsourced material without informing the BIS or made significant, unverified changes to their manufacturing processes thereby attempting to offload larger volumes of goods in our country.

In this context, please refer to 'Application Form – V' (as per Clause (g), page 280) of the **Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 (Annexure 1).** This form requires a license holder at the time of application to declare details regarding the specific product, including the total production units (production lines) utilized, present installed capacity, quantity (in square meters or as otherwise specified), and total value in Indian Rupees.

Additionally, the applicant must submit a declaration regarding their currently available plant and machinery in 'Form – I' (refer to sub-clause (ii) of clause (a) of sub-paragraph (1) of paragraph 3 of Scheme-I). Under Scheme-I, an official appointed to verify the application examines all these facts before granting a recommendation.

The activities constitute a breach of the agreement, rules, and the Act prescribed by the Bureau. Specifically, this falls under the grounds for "license suspension" as per Clause 11 (Suspension), Point 5(V) of Scheme-I (applicable to foreign manufacturers) of the *Bureau of Indian Standards (Conformity Assessment) Regulations, 2018*, and Clause 9 (Sub-clause 9.1) of the 'Agreement for the grant of Bureau of Indian Standards Licence (for use by the Foreign Manufacturer)' specifically Form-IX (refer to clause (b) of sub-paragraph (5) of paragraph 3 of Scheme-I).

We kindly request you to investigate this matter and take appropriate action in accordance with the regulations prescribed by the Bureau of Indian Standards.

2. Non-compliance with regulations by the Authorised Indian representatives (AIR) of foreign license holders

Kindly refer to Form VI prescribed for nomination by the manufacturer (refer to clause (g) of sub-paragraph (1) of paragraph 3 of Scheme IV) **(Annexure 2).** During the licensing process, a manufacturer is required to appoint an individual as the Authorized Indian Representative (AIR).

The primary objective of this appointment is to resolve through this authorized individual any complaints arising in the Indian market regarding the material supplied by the foreign manufacturer this role also entails legal and financial implications.

Consequently, under the Bureau of Indian Standards (BIS) regulations, an AIR represents only one manufacturing firm and does not act as an AIR for any other foreign manufacturer under the BIS Conformity Assessment Scheme. However, this restriction does not apply if the foreign manufacturing companies belong to the same corporate group and an importer (affiliated with the foreign manufacturer) has been nominated as the AIR.

A thorough investigation into this matter may discover instances where distinct companies whose management structures are unrelated and which hold licenses for different products are sharing the same Authorized Indian Representative (AIR).

This connection is likely to become more evident upon searching for the AIR's name, email IDs, and phone numbers details that the manufacturers were required to declare in Form VI (refer to clause (g) of sub-paragraph (1) of paragraph 3 of Scheme IV) at the time of obtaining the license.

This constitutes a direct violation of the Bureau of Indian Standards' rules and the relevant Act; in the event of a dispute, it could create a critical situation for Indian consumers.

We request you to examine the afore mentioned areas of our concern and take appropriate action.

Thanking



Gagan Malhotra
Director (Government Relations)
Federation of Indian Plywood and Panel Industry (FIPPI)

ENCLOSURE:
1. Annexure - 1 : Bureau of Indian Standards (Conformity Assessment) Regulations, 2018
2. Annexure - 2 : Regulations by the Authorised Indian representatives (AIR) of foreign license holders

Final Findings in the Melamine Anti-Dumping Investigation: A Critique



Vasudha Singh
Advocate
Supreme Court of India

Introduction

By its final findings dated 28 September 2026 in Case No. AD (OI) 35/2025, the Directorate General of Trade Remedies (the "Authority") has recommended definitive anti-dumping duty on melamine from China PR for five years. The duties range from US$ 245 to US$ 403 per MT, which the Authority computes at 25 to 42%of the landed price. The investigation was initiated on the application of Gujarat State Fertilizers and Chemicals Limited ("GSFC"), the sole Indian producer.

Anti-dumping duty on melamine from China PR was in force from 2004 until 30 September 2021. The Authority recommended its continuation in the sunset review of August 2021, and by an Office Memorandum dated 1 October 2021 the Central Government decided not to impose it. The present application followed within four years, with an injury period commencing in April 2021. It is argued that the final findings suffer from infirmities of law and that the injury determination is not supported by the figures the Authority has itself placed on record.

Part A: Infirmities of Law

Non-disclosure of the essential facts

The duty rests on four determinations: the normal value, the export price, the margin of dumping and the non-injurious price ("NIP"). Only the normal value is stated to lie between US$ 1,000 and 1,100 per MT, and the NIP between US$ 1,100 and 1,200 per MT.

In Century Plyboards (I) Ltd. & Anr. v Union of India & Ors., WP(C) No. 6568/2017, Gauhati High Court, judgment dated 26.08.2019, concerning this very product and in which GSFC was heard as intervener, a Single Judge Bench of Hon'ble Gauhati High Court held that these values are essential facts which Rule 16 of the Anti-Dumping Rules, 1995 (the "Rules") requires to be disclosed, and that Rule 16 is not subject to the non obstante clause in Rule 7:

"169. … the same cannot be stretched to the extent that even the determination by the designated authority as regards the normal value or the export price or the margin of dumping or even the non-injurious price of the domestic industry shall remain confidential to the extent that it will not be revealed at all to any one at any stage, but the ADD would be imposed."

The Court directed that any review of the duty on melamine from China PR follow Rules 6(8), 7, 8 and 16 as interpreted in the judgment. The judgment dated 06.04.2022 in the Review Petition No. 9/2020 against the Single Judge Bench judgment left these aspects undisturbed. GSFC's application for leave to appeal against paragraph 169 of the Single Judge Bench judgment was dismissed by a Division Bench in Gujarat State Fertilizers and Chemicals Ltd. v Century Plyboards (I) Ltd. & Ors., I.A.(Civil) No. 2414/2022 on 21.06.2023, which observed that the values on which the duty is quantified "cannot be considered as confidential material by any stretch of imagination". The direction in paragraph 169 of the Single Judge Bench judgment therefore has attained finality.

The Authority holds that these directions were confined to notifications that have since lapsed, and that it is "precluded from disclosing the absolute figures … at any stage of the investigation". The judgment construes Rules 7 and 16 in relation to the same product and the same applicant, and paragraph 171 was addressed expressly to future proceedings. The ratio of a judgment interpreting a statutory provision does not lapse with the notification under challenge. The Hon'ble Supreme Court has likewise held that confidentiality under Rule 7 is not something which must be automatically assumed, that Rule 7 confers no right of confidentiality on the Authority itself, and that the Authority cannot, in the garb of unclaimed confidentiality, withhold the reasons for its findings. The apprehension of adverse litigation by parties recorded at paragraph 176 is not a ground recognised by Rule 7.

Construction of normal value

Paragraph 7 of Annexure I to the Rules requires normal value for a non-market economy to be determined on the basis of a market economy third country, and only "where it is not possible", on any other reasonable basis. In Shenyang Matsushita S. Battery Co. Ltd. v Exide Industries

Ltd., (2005) 3 SCC 39, the Hon'ble Supreme Court held that the Authority "must exhaust the first method before moving to the alternative procedure", and the Hon'ble Gauhati High Court in the Single Judge Bench judgment has held that this obligation does not depend on the cooperation of the Chinese producers. The Authority stated it moved to the residual method because no interested party furnished third country data. The obligation, however, is the Authority's, and public material was available, including Commission Implementing Regulation (EU) 2025/325.

Objective examination and non-attribution

Annexure II to the Rules requires "an objective examination" of injury and prohibits the attribution to dumped imports of injury caused by other factors, which must be separated and distinguished. The Hon'ble Gauhati High Court in the Single Judge Bench judgment has observed that competition from imports, on its own, "would not be a justifiable reason for the authorities to impose an ADD".

GSFC stated in its application that it had produced and sold to the extent of its capacity and had not claimed volume injury, yet the findings rely on declines in production,

sales and market share. The application claimed significant positive price undercutting, which the verified data do not bear out, and the Authority holds that this difference "has no bearing on the determination". The known factors other than dumped imports are addressed in brief and are not quantified, including the global fall in prices, reflected in a 53% fall in GSFC's own export realisations in markets unaffected by the subject imports, the suspension of Plants I and II, which GSFC described in 2021 as a "deliberate curtailment of production", the reallocation of GSFC's output to exports in 2022-23, when its export sales index rose from 100 to 199 with total sales unchanged, and the displacement of imports from the European Union, Japan, Qatar and the UAE, which GSFC itself described in 2021 as "a factor which is causing injury to the domestic industry" and which are now relied upon as evidence of injury caused by China PR.

Public interest

The Authority treats the Central Government's decision of 01.10.2021 as of no consequence to the present investigation. Its reasons are not on record, and no inference is invited as to them, but the decision is a fact concerning the same product and the same applicant. So too is Customs Notification No. 12/2026 dated 01.04.2026, which reduced to nil the customs duty on several inputs of the melamine value chain. Both are the Central Government's own assessment of where the public interest lies in respect of this product and this value chain, and the Authority ought to have taken the same into account.

Part B: The Authority's Own Figures

GSFC priced below the imports

With price undercutting being negative, the Authority rests its finding on price depression, holding that GSFC "had no option but to align its prices with the landed price" and lost a premium of "about 10%" over imports held in 2021-22. Applying GSFC's price index to that base, its price in 2022-23 was about Rs 1,04,200 per MT against a landed price of Rs 1,15,559, i.e. about 10 per cent below the imports, and it remained about 1 per cent below them thereafter, as the Authority records. It follows that GSFC was not, at any point after the base year, compelled to align its price with a lower import price. On the Authority's own figures, the domestic industry's price remained below the landed price of the subject imports from 2022-23 onwards, a circumstance that is difficult to reconcile with a finding that the subject imports depressed it.

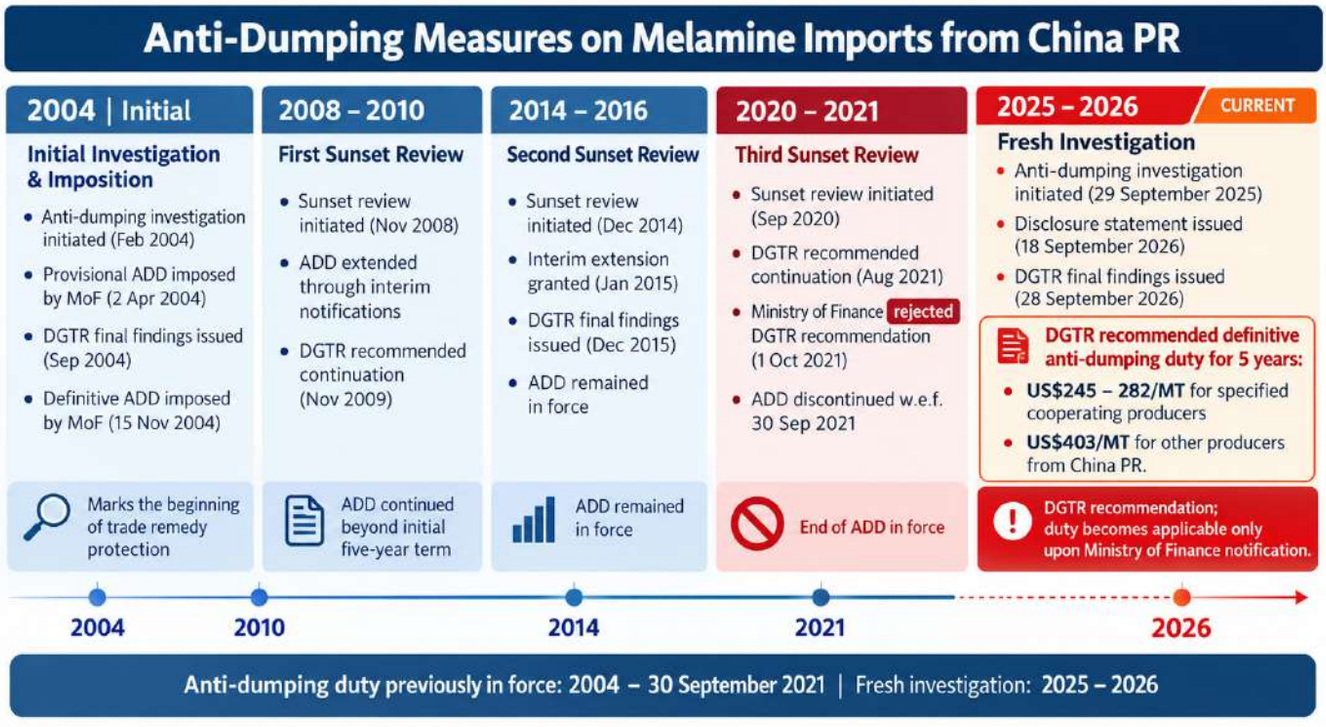
On the Authority's alternative base year, price followed cost

Answering the objection to 2021-22 as the base year, the Authority re-examined the period from 2022-23 and held injury to be established "irrespective of the base year adopted". Over that period GSFC's selling price fell by 22 per cent and its cost of sales

by 21 per cent, while subject imports rose by 51 per cent. The domestic industry's price thus moved in step with its cost, and the finding of price depression rests entirely upon the comparison with 2021-22. That year, however, coincided with the peak of the global price cycle, anti-dumping duty on the subject goods remained in force for six of its twelve months, and the disclosed indices indicate that the domestic industry's profit amounted to nearly one half of its net sales realisation. A base year of that character is not a reliable benchmark against which to measure injury.

Normal value corresponds to GSFC's cost

At the Authority's exchange rate, the normal value lies between Rs 85,430 and 93,973 per MT. GSFC's cost of sales in the period of investigation, derived from the same indices, is about Rs 88,200 per MT. The NIP, being GSFC's optimised cost with a 22 per cent return on capital employed, exceeds the normal value. Even at a price the Authority regards as fair, Chinese melamine would on these figures continue to show injury to GSFC. The findings treat the circumstance that the import price is below the domestic industry's cost as establishing price injury, and the circumstance that the imports are dumped as establishing the causal link.



Where, however, the normal value itself corresponds to the domestic industry's cost, the margin of dumping, the finding of price injury and the finding of causation each reduce to the same comparison between the Chinese price and that cost. A single comparison is thus made to serve as proof of all three. The Authority's answer that these are "distinct determinations based on different information" is not borne out by its own figures.

Volume, capacity and the residual duty

The Authority excludes the costs of Plants I and II because the injury claimed "pertains solely to Plant III", but computes capacity utilisation on all three plants. Production of 42,452 MT in the period of investigation exceeds Plant III's rated capacity of 40,000 MT, and GSFC's average inventory fell to an index of 30. Not less than about three fifths of the increase in subject imports is accounted for by growth in demand and the decline of third country imports, and the Authority itself held in 2018 that imports required to meet the demand-supply gap are "in-fact a necessity".

The residual duty of US$ 403 per MT, when set against a non-injurious price of US$ 1,100 to 1,200 per MT, presupposes a landed price of US$ 697 to 797 per MT for the imports of non-cooperating producers. The disclosed figures, however, indicate that those imports landed at approximately US$ 964 to 1,011 per MT, which would yield an injury margin of only US$ 89 to 236 per MT. On a volume of approximately 85,000 MT a year, the difference is of the order of Rs 122 to 229 crore annually. While Rule 6(8) permits the Authority to proceed on the facts available, the facts on which the residual duty has been determined have not been disclosed, and the import data on record do not support the figure adopted.

Conclusion

The melamine proceedings now span more than two decades and five investigations. Anti-dumping duty is a remedy against a specific form of unfair trade. It is not intended to insure a domestic producer against competition, or against the consequences of its own cost structure. The concern is sharpened by the structure of the market. GSFC is the sole producer of melamine in India, and the greater part of Indian demand can be met only by imports. Where both the normal value and the non-injurious price are derived, in substance, from that producer's own costs, it confers upon the sole domestic producer a degree of pricing power characteristic of a monopoly, the cost of which is borne by downstream micro, small and medium enterprises. Duties on this product have been in force for some seventeen years, during which the Authority's own findings recorded a several-fold increase in GSFC's profitability.

The prevailing state of affairs calls for a broader reconsideration of how trade remedy proceedings are conducted in India, of the standards by which injury and causation are tested, of the benchmarks against which fairness is measured, and of the place of transparency in a quasi-judicial process whose consequences are borne by entire downstream industries and, ultimately, by the consumer. Until those questions are addressed, a remedy designed to restore fair competition risks becoming an instrument for its indefinite suspension.

FIPPI Representation Regarding the Proposal for MIP on Melamine

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

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Chief Patron	Patrons	President	Senior Vice President	Vice Presidents	Director General
Mr. Sajjan Bhajanka	Mr. S.P. Mittal Mr. M.S. Vagh Mr. N.K. Aggarwal	Mr. Rajesh Mittal	Mr. Jaydeep Chitlangia	Mr. Jikesh Thakkar Mr. Keshav Bhajanka	Dr. M.P. Singh

FIPPI/DCPC/2026-27/01 July 27, 2026

To,

Shri Dr. G. Venkatesh
Joint Secretary (Petrochemicals)
Department of Chemicals and Petrochemicals
Ministry of Chemicals and Fertilizers
Kartavya Bhawan-2, New Delhi

Subject: Representation Regarding the Proposal for Imposition of Minimum Import Price (MIP) on Melamine

Reference: Stakeholders' Meeting on the Proposal for Minimum Import Price (MIP) on Melamine held on 20th July 2026

Respected Sir,

At the outset, we sincerely thank the Department of Chemicals & Petrochemicals for convening the stakeholders' meeting on the proposal for imposition of Minimum Import Price (MIP) on Melamine (HSN 29336100) under your Chairmanship. We appreciate the opportunity provided to stakeholders, including the plywood and panel industry, to present their views on the proposal.

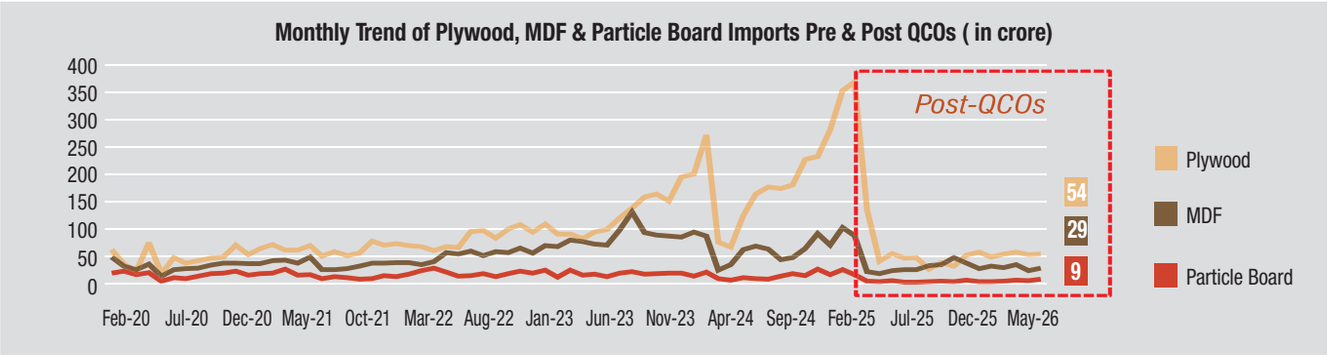
2. We further take this opportunity to introduce the Federation of Indian Plywood & Panel Industry (FIPPI) – the apex body representing manufacturers and regional associations engaged in the production of plywood, medium-density fibreboard (MDF) and particle board across India. The Indian wood panel industry supports over one million farmers through agroforestry-based timber sourcing, provides employment to over 3.5 million people across the value chain, and contributes significantly to domestic value addition in the furniture, housing and infrastructure sectors. The industry is predominantly MSME-driven, with nearly 80% of manufacturers belonging to the unorganized sector.

International Competitiveness of Domestic Plywood and Panel Products

3. Over the past few years, the domestic wood panel industry has faced significant competitive pressures arising from the influx of sub-standard and low-priced imports. Recognising these challenges, FIPPI, along with various regional industry associations, consistently advocated for the implementation of Quality Control Orders (QCOs), which have since played an important role in promoting quality compliance, encouraging industry formalization, attracting investments and establishing a level playing field for domestic manufacturers.

3.1 While these measures have strengthened the industry's growth prospects, the sector continues to operate in a highly price-sensitive environment owing to the large presence of unorganized manufacturers. Any measure that increases the cost of a critical raw material has far-reaching implications for the competitiveness of the domestic wood panel industry, especially when 75 foreign manufacturers have been granted BIS licenses across plywood, MDF and particle board segments.

3.2 In view of the foregoing, FIPPI respectfully submits that the proposed imposition of a Minimum Import Price (MIP) on melamine is unjustified in the prevailing international market conditions, particularly when plywood and panel products are already struggling to remain price-competitive against foreign manufacturers who benefit from access to government



forest land for timber production. In India, manufacturers procure timber from farmers under agroforestry system, which are competitive with other agricultural crops.

India's Melamine Market Structure and Structural Dependence on Imports

4. Melamine is a critical industrial input for several downstream manufacturing sectors, with no commercially viable substitutes for several key applications. However, domestic supply remains constrained by a single-producer structure and is substantially inadequate to meet domestic requirements. The plywood and panel industry alone requires approximately 70 thousand metric tons of melamine annually, compared with GSFC's total production of only 38 thousand metric tons in 2025–26, making continued reliance on imports indispensable. Further, despite nearly 17 years of anti-dumping protection on melamine imports from China, import dependence continued to increase, indicating that trade protection has not addressed the underlying structural supply constraint. The proposed MIP is therefore unlikely to resolve the demand-supply imbalance and would instead increase input costs for downstream manufacturing industries. ***(Details are annexed as Annexure I)***

International Comparison of Melamine Export Unit Prices

5. International trade data indicates that China supplies melamine across a broad and diversified range of international markets, rather than being disproportionately focused on India. Further, a comparison of China's export unit prices across major destination markets shows that prices applicable to India are broadly comparable with those prevailing in several other countries, with certain markets receiving supplies at similar or even lower prices. Thus, when viewed in the context of China's wider international export pattern, the price applicable to India does not appear materially lower than that observed across comparable destination markets, thereby not indicating any India-specific pattern of abnormal pricing. ***(Details are annexed as Annexure II)***

6. It is also pertinent to note that the Directorate General of Trade Remedies (DGTR) has already initiated an anti-dumping investigation concerning melamine imports from China (Ref. No. 6/40/2025-DGTR dated 29th September 2025), which is yet to be concluded. At the same time, imposition of MIP on melamine would increase input costs for domestic wood panel manufacturers, thereby reducing their competitiveness vis-à-vis imported finished products and adversely affecting domestic manufacturing, agroforestry-based timber demand, employment generation and domestic value addition.

In view of the above, FIPPI respectfully requests the Department not to impose MIP on melamine and to ensure continued access to this critical industrial input at competitive prices, in the larger interest of downstream manufacturing and domestic value addition.

We shall be grateful for your kind consideration of the above submissions.

Thanking You

,

Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

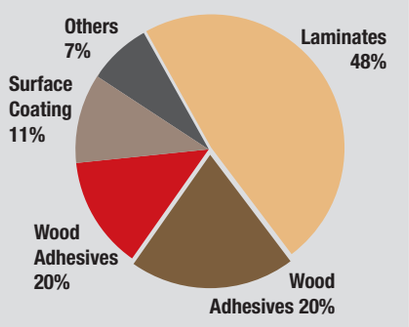
Annexure I

India's Melamine Market Structure and Structural Dependence on Imports

1.0 Application-wise Distribution of Melamine Consumption in India

Melamine occupies a distinctive position in India's manufacturing ecosystem because it is not a finished product, but a core intermediate input that enables performance, durability and value addition across multiple downstream industries.

Figure 1: Application wise Distribution of Melamine Consumption



Its usage is broad and multi-sectoral; however, its most significant application is in the wood-based panel and laminate industry. Melamine is extensively used in the production of decorative laminates, plywood, MDF and particle board, where it plays a critical role in imparting strength, surface hardness and moisture resistance. Further, there are no commercially viable substitutes for melamine-based resins in several critical applications in India. Therefore, for downstream industries dependent on melamine-based resins, melamine is not merely a raw material but a technical necessity that directly affects product quality, compliance with applicable standards and market competitiveness.

2.0 India's Domestic Melamine Market Structure

India's domestic melamine market is characterized by a single-producer structure, with Gujarat State Fertilizers & Chemicals Limited (GSFC) being the only domestic manufacturer. As

Table 1: Overview of Domestic Production and Trade of Melamine in India (in thousand metric tons)

Year	GSFC's Melamine Production	India's Imports of Melamine	India's Exports of Melamine
2021-22	53	74	8
2022-23	48	85	17
2023-24	44	94	15
2024-25	42	120	12
2025-26	38	144	22

reflected in Table 1, GSFC's melamine production declined from 53 thousand metric tons in 2021–22 to 38 thousand metric tons in 2025–26, while imports increased from 74 thousand metric tons to 144 thousand metric tons during the same period. This indicates that imports have assumed an increasingly important role in supplementing domestic production to meet India's growing melamine requirements.

At the same time, it is pertinent to note that the domestic industry's exports of melamine increased from 8 thousand metric tons in 2021–22 to 22 thousand metric tons in 2025–26. The continuation of exports despite the widening domestic demand-supply gap and increasing reliance on imports raises serious questions regarding the rationale behind the domestic industry's request for the imposition of a MIP.

3.0 India's Structural Dependence on Imported Melamine

The plywood and panel industry alone requires approximately 70 thousand metric tons of melamine annually, as presented in Table 2. This is more than 1.8 times GSFC's total melamine production in 2025–26, indicating that domestic production is inadequate to meet the requirements of even this single downstream sector.

It is pertinent to note that the plywood and panel industry represents only one

Table 2: Segment-wise Consumption of Melamine in the Plywood and Panel Sector (in thousand metric tons)

Segment	Estimated Annual Melamine Consumption
MR (Moisture-Resistant) Plywood	13
Non-MR Grade Plywood	20
Exterior / Semi-Exterior Grade MDF	33
Lamination of MDF & Particle Board with Melamine Decorative Papers	3.6
Total	70

of several end-use sectors consuming melamine in India. Other downstream applications include coatings, thermoset plastics, kitchenware, electrical applications and flame-retardant textiles. Consequently, India's overall melamine requirement is significantly higher than the domestic production capacity. The persistent gap between domestic production and national demand has resulted in a structural dependence on imported melamine, with imports serving to bridge this gap and ensure uninterrupted availability of this critical raw material for downstream manufacturing industries.

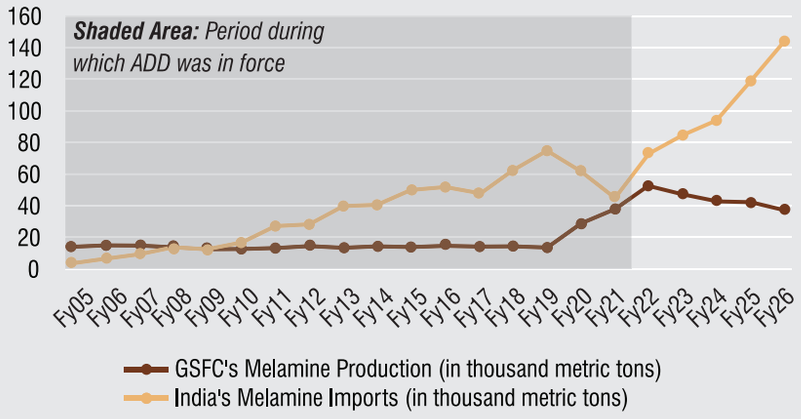
4.0 India's Persistent Demand-Supply Gap Despite Nearly 17 Years of Anti-Dumping Protection

Anti-dumping measures on melamine imports from China remained in force for nearly 17 years, from April 2004 (provisional anti-dumping duty) to September 2021. Figure 2 shows that despite this prolonged trade remedy measure, growth in GSFC's melamine production and expansion of domestic production capacity remained gradual. During the period in which anti-dumping measures were in force, GSFC's melamine production recorded a compound annual growth rate (CAGR) of around 6%, while India's melamine imports increased at a significantly higher CAGR of approximately 14%. As a result, the

gap between domestic production and import requirements widened progressively over time, reflecting the persistence of India's structural dependence on imported melamine.

The experience of the anti-dumping regime demonstrates that trade protection alone did not address India's structural demand-supply imbalance in melamine. This suggests that the proposed MIP, another border trade measure, is also unlikely to resolve the underlying issue of inadequate domestic production capacity and may instead increase input costs for downstream industries that rely on imported melamine.

Figure 2: Comparative Trends in India's Melamine Production and Imports (FY05 FY26)



Annexure II

International Comparison of Melamine Export Unit Prices

1.0 International Trade Pattern and India's Melamine Import Sourcing

International trade data indicates that China is the world's largest exporter of melamine, supplying a large number of international markets. In 2025, China exported melamine to 78 countries, with India emerging as the largest single export destination, accounting for around 22% of China's total export volume. Collectively, the five largest destination markets—India, Turkey, Vietnam, Brazil and Thailand—accounted for nearly half of China's total melamine exports, reflecting its broad and diversified export base.

In contrast, India's melamine import sourcing pattern is highly concentrated, with around 98% of imports originating from China in 2025. While China's melamine exports are distributed across a wide range of international markets, India's imports remain overwhelmingly dependent on a single source. The broad geographical spread of China's export destinations indicates that its export presence extends across diverse international markets and is not disproportionately focused on the Indian market.

Figure 1: Major Destinations of China's Melamine Exports by Volume, 2025 (in kt)

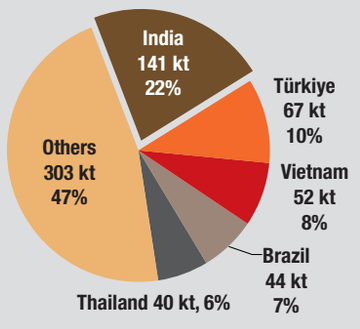
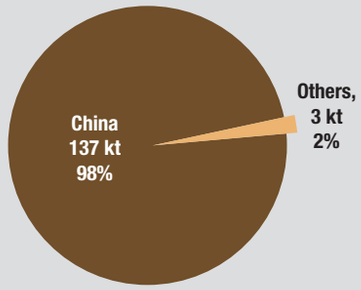


Figure 2: Major Suppliers of Melamine to India by Volume, 2025 (in kt)



2.0 Comparative Assessment of China's Export Unit Prices

Table 1 compares China's average export unit prices of melamine across its ten largest destination markets during 2025. India, being the largest destination for China's melamine exports with imports of around 141 thousand metric tons, imported melamine at an average export unit price of US$694/MT, which is broadly comparable to the prices applicable to several other major importing countries, including Brazil (US$697/MT), Thailand (US$696/MT) and Australia (US$699/MT). Indonesia, another major destination market, imported melamine at an even lower average export unit price of US$687/MT.

The cross-country comparison indicates that China's export unit prices applicable to India are broadly aligned with those prevailing across several other major importing countries. Viewed in the context of China's exports to multiple international markets, the export unit price applicable to India does not appear to be materially lower than the prices observed across comparable destination markets.

Table 1: Comparison of China's Melamine Export Unit Prices Across Major Importing Countries, 2025

Rank (by Qty)	Importing Country	Exported Quantity from China (in thousand metric tons)	China's Export Unit Price (US$/MT)
1	India	141	694
2	Türkiye	67	702
3	Vietnam	52	707
4	Brazil	44	697
5	Thailand	40	696
6	Poland	25	910
7	Indonesia	26	687
8	Belgium	22	814
9	Australia	22	699
10	S. Korea	21	716

FIPPI Letter - DPIIT - Raw Material Constraints

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY
REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969
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Chief Patron	Patrons	President	Senior Vice President	Vice Presidents	Director General
Mr. Sajjan Bhajanka	Mr. S.P. Mittal Mr. M.S. Vagh Mr. N.K. Aggarwal	Mr. Rajesh Mittal	Mr. Jaydeep Chitlangia	Mr. Jikesh Thakkar Mr. Keshav Bhajanka	Dr. M.P. Singh

FIPPI/DPIIT/2026-27/19 August 14, 2026

To,
Shri Sudhir Kumar
Under Secretary to the Govt. of India
Consumer Industry Section
Department for Promotion of Industry & Internal Trade
Vanijya Bhawan, New Delhi

Subject: Response to DPIIT's Request for Comments and Information on the Proposed Restriction on Imports of Raw Materials Used in the Plywood and Panel Industry

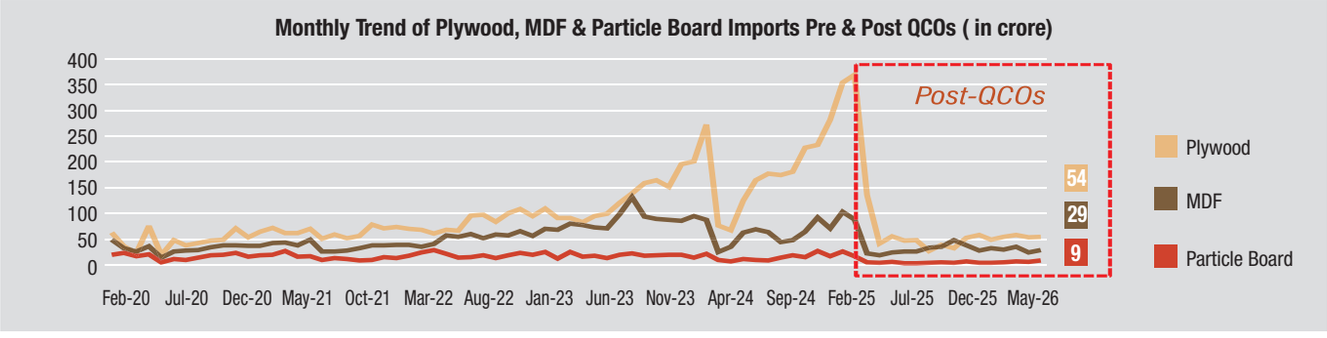
Reference: DPIIT Letter No. P-14021(31)/17/2026-C. I E-234056 dated 6th August 2026

Respected Sir,

The Federation of Indian Plywood and Panel Industry (FIPPI) submits its views on the proposed restriction on imports of wood, core veneer, core ply/mat ply and face veneer. FIPPI submits that restricting these essential raw material imports will adversely affect domestic plywood and panel manufacturing.

Rising Raw Material Imports Reflect Growing Domestic Manufacturing

2. FIPPI wishes to highlight that the increase in imports of raw materials also reflects the growing requirement of domestic manufacturers following the enforcement of the Quality Control Orders (QCOs) on plywood and other wood-based panel products in February 2025. The QCOs have facilitated import substitution of finished products, resulting in greater domestic production and, consequently, increased demand for raw materials and intermediate inputs.



Structural Constraints on Domestic Raw Material Availability

3. It is important to clarify that the industry's dependence on imports of timber-based raw materials is not primarily driven by cost advantages, but by their limited domestic availability. As per the ICFRE Report (2024), India faces a timber deficit of approximately 40.64 million cubic metres, making imports necessary for industries dependent on timber-based raw materials. The key factors constraining domestic availability are as follows:

- **Regulatory constraints on agroforestry:** Agroforestry-grown timber continues to be subject to complex and non-uniform regulations across States. These regulatory variations discourage farmers from undertaking tree cultivation at scale and constrain the development of a reliable domestic timber supply.
- **Limited adoption of high-productivity planting material:** The use of high-yielding clonal planting material remains concentrated in a few States. While clonal plantations have gained significant adoption in Uttarakhand, Western Uttar Pradesh, Haryana and Punjab, several other States continue to rely predominantly on conventional seedlings, resulting in lower productivity and limiting the expansion of domestic timber supply.
- **Limited availability of timber suitable for face veneers:** Domestic agroforestry is predominantly based on short-rotation species such as poplar and eucalyptus, which are generally not suitable for manufacturing high-quality face veneers, excluding reconstituted veneers. The limited domestic availability of suitable face-veneer species (long-rotation which were earlier available from the forest), has therefore increased reliance on imported timber for this requirement.

Import Trends of Timber-Based Raw Materials

4. The plywood and other wood-based panel industry imports three major categories of timber-based raw materials—logs (HSN 4403), sawn wood (HSN 4407) and veneers (HSN 4408). The major products/species imported under these categories at the 8-digit HSN level are presented below:

Table 1: Major Species-wise Imports of Logs (HSN Code 4403) in 2025-26

HSN Code	Product Description	Import Value (in ₹ crore)	Share of 4403	Imports (in %)
44034200	Teak	2,354	26%	Ecuador, Brazil
44032190	Others – Of Pine (Pinus spp.), of which the smallest cross-sectional dimension is 15 cm or more	2,124	24%	Australia, New Zealand
44032110	Saw logs and veneer logs	1,302	15%	Uruguay, USA
44039990	Others – Of other wood in the rough	848	9%	Malaysia
44034100	Dark Red Meranti, Light Red Meranti and Meranti Bakau	729	8%	Malaysia
44032290	Others – Of Pine (Pinus spp.), other	697	8%	Australia, Argentina
44039800	Of Eucalyptus (Eucalyptus spp.)	474	5%	South Africa

Table 2: Major Species-wise Imports of Sawn Wood (HSN Code 4407) in 2025-26

HSN Code	Product Description	Import Value (in ₹ crore)	Share of 4407	Imports (in %)
44071100	Of Pine (Pinus spp.)	1,258	28%	Brazil, Germany
44072300	Teak	911	20%	Togo, Ivory Coast
44072900	Sawn/Chipped wood, sliced or peeled, thickness >6 mm – Other	715	16%	Indonesia, Malaysia
44071200	Of Fir (Abies spp.) & Spruce (Picea spp.)	403	9%	Germany
44072200	Virola, Imbuia & Balsa	379	8%	Papua New Guinea, Ecuador
44079920	Sawn/Chipped Wood of Willow	271	6%	UK
44079990	Other Sawn/Chipped wood, thickness >6 mm – Other	172	4%	USA
44079200	Sawn/Chipped Wood of Beech	142	3%	Germany, France
44079100	Sawn/Chipped Wood of Oak	136	3%	France, USA

Table 3: Major Species-wise Imports of Veneers (HSN Code 4408) in 2025-26

HSN Code	Product Description	Import Value (in ₹ crore)	Share of 4408	Imports (in %)
44089090	Other Veneer/Plywood Sheets of Other Wood	2,381	53%	Gabon, Vietnam, Tanzania
44083990	Other Veneer/Plywood Sheets of Tropical Wood	1,448	32%	Indonesia
44089010	Veneer Sheets for Plywood	437	10%	Nepal, Indonesia

The above import profiles clearly demonstrate the gap between the domestic availability of timber-based raw materials and domestic demand for such materials. The imports comprise a diverse range of species and product categories, including pine, teak, fir, spruce, meranti, eucalyptus and tropical hardwoods, as well as veneer sheets for plywood. This indicates that imported raw materials not only supplement the domestic timber base where domestic supply falls short of demand but also provide domestic manufacturers access to species and grades that are not available domestically.

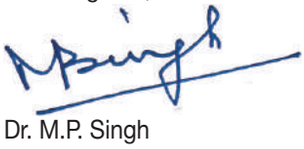
FIPPI Proposed Reforms to Strengthen Domestic Timber Availability

5. In view of these structural constraints on domestic timber availability, FIPPI has consistently taken up the issue with the Government of India and advocated for measures to strengthen the domestic timber resource base. These reforms are aimed at addressing the underlying constraints affecting domestic timber supply and bridging the existing gap between domestic demand and supply. The key reforms proposed by FIPPI are as follows:

- **Enactment of the National Agroforestry Act:** Outdated regulatory provisions governing farm-grown timber create procedural hurdles and discourage the adoption of agroforestry. A National Agroforestry Act can establish a clear legal framework for hassle-free felling, transportation, traceability and marketing of agroforestry timber.
- **Establishment of a National Agroforestry Board:** The absence of a dedicated institutional mechanism limits coordination among farmers, industry, research institutions and other stakeholders. A National Agroforestry Board, along with State and Regional Boards, would strengthen policy coordination and support the long-term development of agroforestry and improved planting material.
- **Incentives for Farmers Growing Agroforestry Species:** The longer gestation period of tree cultivation can discourage farmers from adopting agroforestry. Targeted incentives, such as Direct Benefit Transfer (DBT), can improve the economic viability of tree cultivation, encourage greater plantation of agroforestry species, strengthen domestic timber availability and provide an additional source of income to farmers.
- **Reconstitution of the Development Council for Plywood & Panel Products:** The implementation of QCOs has initiated a structural transformation in the sector, creating opportunities to strengthen domestic manufacturing and enhance global competitiveness. Reconstituting the Development Council for Plywood & Panel Products can provide a dedicated institutional platform for industry-Government coordination, coordinated policy development and addressing emerging sectoral challenges.

In view of the above, FIPPI submits that the proposed restriction on imports of wood, core veneer, core ply/mat ply and face veneer should not be imposed. Restricting imports of critical timber-based raw materials, in the absence of adequate domestic supply, will increase the risk of substitution of domestic production by imported finished panel products, undermining the national policy objectives of Make in India and Atmanirbhar Bharat. Such substitution would also adversely affect farmers' incomes and rural livelihoods and undermine the sector's positive contribution towards climate change mitigation.

Thanking You,



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Letter - RCM 2% TDS on Agroforestry-Timber

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

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FIPPI/GST/2026-27/02 August 17, 2026

To,
Shri Sanjay Mangal
Member (GST, CX, ST)
Central Board of Indirect Taxes & Customs (CBIC)
Department of Revenue, Ministry of Finance
Kartavya Bhawan – I, New Delhi

Subject: Representation for Introduction of Reverse Charge Mechanism (RCM) and 2% TDS on Purchase of Timber from Agroforestry under GST

Respected Sir,

On behalf of the Federation of Indian Plywood & Panel Industry (FIPPI), we respectfully submit this revised representation requesting the GST Council to introduce (a) Reverse Charge Mechanism (RCM) on purchase of timber from agroforestry from unregistered and high risk suppliers, and (b) a 2% GST TDS mechanism on high value B2B timber contracts between registered persons, on the lines of the special two channel framework adopted for metal scrap (Chapters 72–81).

These measures would mirror the policy logic, structure and benefits already recognized by the GST Council and its Fitment Committee in relation to metal scrap, a sector explicitly identified as “high risk, cash heavy” and prone to “major evasion,” for which a combined RCM + TDS regime has been recommended and implemented to curb fake invoicing, strengthen audit trails and protect input tax credit (ITC).

1.0 Background: Economic Importance and Current GST Challenges in Timber from Agroforestry

1.1 FIPPI is the apex representative body for the plywood and wood-based industries in India, representing manufacturers of plywood, blockboard, MDF, particle boards, wooden flush doors, furniture, paper and packaging, all of which critically depend on wood from agroforestry as a primary raw material. As India targets sustained GDP growth led by manufacturing, infrastructure and construction, a robust and compliant timber supply chain is central to both industrial growth and fiscal stability.

1.2 The timber supply chain is structurally very similar to the metal scrap ecosystem that has already been subjected to a special GST regime: it is fragmented, highly informal, and dominated by small, unregistered farmers, village level aggregators, commission agents and part-time contractor/gatherers operating largely in cash and below registration thresholds.

1.3 Presently, wood and timber attract GST at the applicable rate (in many cases 18%), with the obligation to collect and remit tax typically resting on the supplier; however, where the supplier is unregistered or non-compliant, registered manufacturers are unable to secure a reliable ITC chain, leading to tax cascading, frequent disputes and exposure to ITC denial.

1.4 The core structural issues in timber are as under:

- A large quantum of supplies from unregistered persons that never enter the formal GST net, despite being economically significant.
- Widespread non-compliance even among some registered intermediaries, resulting in fake invoicing, non-payment of GST collected and consequent challenges to ITC claims of genuine buyers.

1.5 Sections 9(3) and 9(4) of the CGST Act, 2017 empower the Government to notify categories of supply on which tax shall be paid on reverse charge by the recipient of such supplies, and this power has already been used in "high risk, cash heavy" segments such as metal scrap, where the Council has endorsed a sector specific RCM and TDS framework as part of its broader anti evasion and data driven compliance architecture.

2.0 International and Domestic Policy Precedent: The Metal Scrap Regime

2.1 In its 47th and 54th meetings, the GST Council considered the scrap sector and noted that "major evasion happens in this item," leading to a request that the Fitment Committee conduct a detailed study and design appropriate control measures, with Karnataka and Punjab emphasising the magnitude of leakage and the need for tougher controls and reverse charge options.

2.2 Following detailed consultations with States and industry, the Council's Fitment Committee finally recommended—and the Council accepted—a two pronged, mutually exclusive framework for metal scrap (Chapters 72–81):

- RCM on URP ⟶ RP supplies of scrap: where an unregistered person sells scrap to a registered buyer, the buyer pays 18% GST under reverse charge and can claim ITC, ensuring tax is always paid at the point of organised consumption even if the small seller remains unregistered;
- 2% GST TDS on RP ⟶ RP B2B contracts ≥ ₹2.5 lakh: for high value B2B scrap contracts between registered parties, the buyer deducts 2% TDS (1% CGST + 1% SGST or 2% IGST), deposits it and reports it in GSTR 7, creating an end-to-end digital trail and enabling data driven risk analytics on circular trading and fake invoicing.

2.3 The Fitment Committee explicitly characterised this RCM + TDS package as a "sector specific implementation" of the Council's anti evasion strategy, calibrated to the cash intensive informality at the collection end and the prevalence of fraudulent ITC chains at the registered-to-registered end.

2.4 Post introduction, recorded benefits include:

- More secure tax trails and materially reduced scope for fake ITC chains and invisible turnover;
- Higher, more stable GST revenue from a previously leak prone market, achieved through better compliance rather than rate increases;
- A level playing field for compliant recyclers, as evaders can no longer monetise non-payment of GST as an 18% pricing edge;
- A clear structural push towards formalisation and safer environmental practices, as unreported and "backdoor" operations are disincentivised by the formal tax trail.

2.5 It is hereby submitted that the timber from agroforestry segment is analogous in risk profile and market structure, and that the same policy logic and instrument design are directly applicable.

3.0 Recommended Framework for Timber: RCM on URP Supplies and 2% TDS on RP–RP Contracts

3.1 Reverse Charge Mechanism on purchases of timber from unregistered suppliers

3.1.1 We propose that, consistent with Sections 9(3) and 9(4) of the CGST Act, the Council may notify timber from agroforestry as a category of goods on which GST shall be paid by the registered recipient under RCM, where the supplier is an unregistered person or falls within a notified high-risk category.

3.1.2 Under this:

- Whenever a registered plywood, panel, paper or other wood-based manufacturer purchases timber from an unregistered farmer, aggregator or trader, the manufacturer would pay the applicable GST (e.g. 18%) under reverse charge and self-invoice the transaction in accordance with existing GST rules for RCM, analogous to the URP ⟶ RP scrap supplies regime;
- The tax so paid would be eligible for ITC to the recipient, subject to normal conditions, ensuring a seamless, self-secured credit chain independent of the supplier's compliance behaviour, exactly as the scrap regime was designed to achieve ("safe ITC on tax they deposit themselves").

3.2 2% GST TDS on high value registered to registered timber contracts

3.2.1 We also recommend that the Council introduce a 2% GST TDS mechanism on sizeable B2B timber contracts between registered persons, above an appropriate threshold (for example, ₹2.5 lakh per contract). Key features would be:

- Deduction of 2% of the taxable value (1% CGST + 1% SGST or 2% IGST) by the purchaser on qualifying contracts for supply of timber from registered suppliers, with deposit and reporting in GSTR 7;
- Flow through of TDS credits to the supplier's electronic register, enabling algorithmic matching with GSTR 1 and GSTR 3B to flag mismatches, non-filers and suspicious circular trading or under reporting patterns in this high-volume commodity chain.

3.2.2 These two channels—RCM for URP ⟶ RP and TDS for RP ⟶ RP—should be mutually exclusive, so that each timber transaction is covered by one, but not both, mechanisms, depending on counterparty risk profile.

4.0 Rationale for RCM on Timber Purchases from Unregistered and High-Risk Suppliers

4.1 Capturing the informal, cash-based timber supply chain

Much like the kabadi walas and small scrap aggregators, a large fraction of timber from agroforestry is sourced via small and micro suppliers—individual farmers, village level felling contractors and local traders—who deliberately remain below registration thresholds and transact entirely in cash, thereby staying outside the formal GST net despite substantial aggregated turnover. Under RCM, as successfully implemented for URP scrap supplies:

- Tax is always collected at the point of organised consumption (the registered manufacturer), even where the supplier is unregistered or below threshold;
- Each such purchase is digitally recorded in the buyer's books and GST returns, thereby indirectly drawing the grey, cash-based timber economy into the information net and creating a verifiable trail for enforcement and analytics, as was a core objective in scrap ("formalise the recycling market by shifting compliance on to stronger, organised buyers").

4.2 Shifting liability to financially stronger counterparties

The scrap experience shows that sectors characterised by "fly by night operators" who vanish without remitting GST and leave buyers' ITC exposed are best addressed by placing the primary GST liability on large, financially stable purchasers under RCM. Timber from agroforestry exhibits identical counterparty risk: small felling contractors and rural traders can easily disappear, whereas plywood, panel and paper mills are large, registered entities with the financial capacity and systems to comply consistently. By requiring such registered buyers to self-pay GST under RCM:

- The government secures the tax from a traceable, organised entity and no longer depends on compliance by numerous small, unstable suppliers;
- The likelihood of revenue loss from non-remittance by upstream timber sellers is drastically reduced, mirroring the benefit recorded in the scrap sector ("the 18% GST is guaranteed to be paid by a financially stable corporate entity").

4.3 Protecting genuine buyers' ITC and reducing litigation

Prior to RCM in scrap, large recyclers faced frequent disputes where small suppliers failed to deposit GST collected, leading to questioning or freezing of buyers' ITC—a pattern already visible in the timber segment today. Under an RCM regime for timber, the buyer pays the tax himself and can "safely claim ITC on the tax they deposit themselves," removing dependence on small vendors' compliance and sharply reducing litigation risk and working capital uncertainty in the sector.

4.4 Neutralising the "evasion discount" and levelling the field

In metal scrap, the Council recognised that non-compliant operators could undercut compliant players by roughly 18% simply by not charging or remitting GST, creating a structural price advantage in a low margin commodity business and systematically eroding the base of honest taxpayers. Timber from agroforestry displays the same competitive distortion: mills sourcing through compliant, invoicing channels bear the full GST cost, while those sourcing from unreported, cash-based chains obtain an equivalent evasion-based discount. With RCM, tax is always paid on URP purchases,

effectively "closing the structural loophole" and restoring competitive neutrality between organised and informal timber channels, as has already been achieved in scrap ("evasion-based price advantage…completely closed").

5.0 Rationale for 2% GST TDS on Registered-to-Registered Timber Transactions

5.1 Addressing fake invoicing and circular trading in timber chains

Just as the scrap sector had become "notoriously plagued" by fake invoices and circular trading—where invoices were created without actual movement of goods or payment of tax, solely to pass on fraudulent ITC—timber trading has started to exhibit similar risk patterns, given its commodity nature and large values per consignment. The 2% TDS mechanism for scrap was explicitly designed to:

- Log each large B2B transaction via GSTR 7, creating a financial footprint that can be matched against suppliers declared sales and returns;
- Make circular trading "easily trackable," as invoices lacking corresponding TDS entries stand out in analytics and risk engines.

Applying the same to timber would have identical benefits: high value, high risk chains would be electronically tagged without imposing a material revenue cost on bona fide taxpayers.

5.2 Data capture rather than revenue extraction

The Council and Fitment Committee have been clear that the 2% GST TDS in scrap is primarily a data capture tool rather than a revenue raising measure: it establishes transaction level data for risk-based enforcement, with credits flowing back to genuine suppliers. Extending this logic to timber would significantly enhance the quality and completeness of data available to BIFA and other analytics engines reviewing timber chains, dovetailing with broader system reforms on AI/ML based interdiction, bank validation and geo coding approved by the Council's GoM on GST System Reforms.

6.0 Broader Policy Alignment with GST's Anti-Evasion and Compliance Architecture

6.1 Over multiple Council meetings, a suite of systemic anti evasion measures has been rolled out: tighter rules on fake invoices, sequential filing of GSTR 1 and GSTR 3B, use of advanced analytics (BIFA), stricter registration verification, geo coding of addresses and enhanced data sharing for non GST purposes under a consent based Section 158A framework.

6.2 The RCM + TDS package for metal scrap was explicitly conceived as part of this broader architecture, targeted at a sector with high cash intensity at the collection end and significant fake invoicing at the RP-RP end. Timber from agroforestry displays the same combination of features and is therefore a natural candidate for identical treatment.

7.0 Expected Benefits for Key Stakeholders in the Timber Ecosystem

Drawing directly from the "Real Benefits Matrix" already observed in scrap, the introduction of RCM and TDS on timber would yield the following:

7.1 For Government and Revenue Authorities

- **Secure tax trails:** Between RCM on URP supplies and TDS on large RP RP contracts, essentially all economically meaningful timber flows into factories will be covered by some form of direct or indirect digital trail, greatly reducing invisible turnover and enhancing cross verification possibilities.
- **Lower ITC fraud and plugged leakage:** With tax on URP purchases guaranteed through RCM and major B2B deals logged via TDS, scope for fake ITC chains and unreported timber turnover is materially curtailed, as in the scrap sector.
- **Higher, stable revenue without rate hikes:** Bringing this large, previously undertaxed, unstructured timber market into a more formal regime will naturally lead to sustainable GST collections, aligning with the Council's preference to mobilise resources via compliance rather than across the board rate increases, as seen in other sectors through the GoM on Rate Rationalisation.

7.2 For organised plywood, panel and paper manufacturers

- **Level playing field:** Non-compliant buyers can no longer exploit untaxed or under taxed timber channels to enjoy an illicit cost advantage over compliant manufacturers; competition shifts back towards operational efficiency and quality, which is critical in a commodity driven, low margin industry;

- **Safe ITC and reduced disputes:** Registered buyers will be able to "safely claim ITC on the tax they deposit themselves under RCM," greatly reducing the risk of credit blocks, audit disputes and retrospective demands based on supplier non-compliance, just as in scrap.

7.3 For the informal timber ecosystem and environmental governance

- **Gradual push towards formalisation:** While small farmers and micro suppliers are not forced into registration overnight, the fact that organised mills will now insist on proper documentation and accurate reporting to protect their own GST positions will indirectly nudge upstream timber actors towards formalisation and better record keeping, as already noted in the scrap sector ("pushed to formalize").

- **Discouraging illegal and environmentally harmful practices:** As unreported timber channels become less economically attractive due to the growing dominance of documented, taxed chains, there will be a natural disincentive for illegal felling, unlicensed depots and environmentally hazardous practices, paralleling the movement away from "hazardous, backdoor backyard smelting" observed in scrap recycling.

8.0 Suggested Implementation Approach

8.1 **Notification under Sections 9(3)/9(4):** The Council may consider issuing a notification designating timber from agroforestry as goods subject to RCM when supplied by unregistered persons or specified high risk categories of registered suppliers, using the precise legal mechanism already deployed for scrap.

8.2 **Notification for 2% TDS on high value RP–RP contracts:** A parallel notification, mirroring the scrap regime, may define the threshold (e.g. ₹2.5 lakh per contract) and scope of timber transactions on which buyers must deduct 2% GST TDS and report in GSTR 7.

8.3 **System readiness and transition:** As with the implementation of RCM/TDS for scrap and various system reforms endorsed by the Council, we respectfully suggest a reasonable transition period, with adequate trade outreach and GSTN readiness, to ensure smooth adoption and minimal disruption.

9.0 Prayer

9.1 In light of the above, and in particular the Council's and Fitment Committee's own reasoning and experience in designing and implementing a combined RCM + TDS regime for metal scrap to address very similar risks and market structures; and the demonstrated success of that regime in securing tax trails, reducing ITC fraud, increasing revenue, levelling competition and nudging a high risk sector towards formalisation, we humbly request that the GST Council:

- **Notify timber from agroforestry for RCM** under Sections 9(3)/9(4) of the CGST Act, 2017, on the same conceptual lines as URP ⟶ RP supplies of metal scrap; and

- **Introduce a 2% GST TDS mechanism** on high value B2B timber contracts between registered persons, with a threshold and operational design analogous to that already adopted for scrap, ensuring that the two mechanisms remain mutually exclusive.

9.2 We remain at your disposal for any further information, data or technical inputs the Council, Law Committee or Fitment Committee may require, and would be honoured to participate in any consultations or working groups constituted on this subject.

Yours faithfully,



Dr. M. P. Singh (Retd. IFS)
Director General
Federation of Indian Plywood & Panel Industry (FIPPI)

FIPPI's Suggestions on the Revised National Product Classification (NPC)

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY
REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969
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FIPPI/MOSPI/2026-27/01 September 1, 2026

To,
Shri Subham Garg
Senior Statistical Officer
Economics Statistics Division (ESD)
Ministry of Statistics and Programme Implementation
Khurshid Lal Bhawan, Janpath, New Delhi

Subject: FIPPI's Suggestions on the Revised National Product Classification (NPC) for the Plywood and Panel Industry

Reference: MoSPI's Email dated 12th August 2026 seeking Comments/Suggestions on the Revised NPC

Respected Sir,

The Federation of Indian Plywood and Panel Industry (FIPPI) has reviewed the revised National Product Classification (NPC), which is aligned with the United Nations (UN) Central Product Classification (CPC) Version 3.0. FIPPI wishes to submit its suggestions on the revised NPC with respect to products and raw materials falling under the purview of the plywood and wood-based panel industry.

2. Firstly, FIPPI wishes to commend the Ministry for the increased granularity in the revised classification. The revised structure now provides separate identification for several products and categories that were earlier covered under broader classifications, thereby enabling a more detailed representation of the sector. Some of the key improvements observed in respect of products relevant to the plywood and wood-based panel industry are as follows:

   a. **Roundwood:** Earlier broadly classified as coniferous and non-coniferous logs, roundwood has now been further classified into sawlogs and veneer logs and pulpwood and wood for wood-based panels.

   b. **Veneer Sheets:** Earlier covered under one broad category, veneer sheets are now further classified based on coniferous, tropical non-coniferous and other non-coniferous wood.

   c. **Plywood:** Earlier broadly classified, plywood is now further classified based on the type of wood used in the outer plies, including coniferous, tropical and other non-coniferous wood.

   d. **Fibreboard:** Earlier covered under one broad category, fibreboard is now separately classified into Medium Density Fibreboard (MDF), hardboard and other fibreboard.

   e. **Particle Board**: Earlier covered under one broad category, particle board is now separately classified into particle board of wood, Oriented Strand Board (OSB), and particle board of other ligno-cellulosic materials, including bagasse and bamboo.

f. **Wooden Furniture:** Earlier, separate categories were available for wooden furniture used in offices and kitchens. The revised classification also separately identifies wooden furniture used in bedrooms.

3. However, certain important products and product categories of the plywood and wood-based panel industry require specific recognition at the 5-digit CPC Sub-Class level, while certain products require further differentiation through the 7-digit national extension. Accordingly, FIPPI recommends the following additions and modifications:

A. Additions/modifications at the 5-digit CPC Sub-Class level

The following additions/modifications are proposed at the 5-digit CPC Sub-Class level:

- Laminated Veneer Lumber (LVL) – 31424
- Reconstituted Wood Veneers & Products – 31425
- Compressed Wood Laminates – 31426
- Revision of Sub-Class 31441 to Medium-density Fibreboard (MDF) & High-density Fibreboard (HDF)
- Fibre Hardboard – 31442
- Revision of Sub-Class 31610 to Blockboard

B. Products requiring separate identification at the 7-digit national level

In addition to the above recommendations at the 5-digit level, FIPPI recommends separate identification of important products at the 7-digit national level through the proposed two-digit national extension. The following product categories are proposed:

- **Agroforestry Timber Species:** Poplar, Eucalyptus, Malabar Neem/Melia, Rubberwood, Subabul and Casuarina under CPC Sub-Class 03122.
- **Plywood:** General Purpose Plywood, Marine Plywood, Fire Retardant Plywood, Decorative Veneered Plywood, Structural Plywood, Shuttering Plywood, Flexible Plywood and Other Plywood under CPC Sub-Class 31412.
- **Fibreboard:** General Fibreboard, MR Fibreboard, HMR Fibreboard, BWP Fibreboard and Laminated Flooring Fibreboard under CPC Sub-Class 31441.
- **Doors:** Solid Core Flush Door Shutters, Cellular/Hollow Core Flush Door Shutters and Blank Type Doors under CPC Sub-Class 31622.
- **Engineered Timber:** Glued Laminated Timber (GLT) and Cross Laminated Timber (CLT) under CPC Sub-Class 31627.

The detailed product-wise recommendations, along with their rationales, are enclosed in the Excel sheet for your kind perusal.

In view of the above, FIPPI requests the Ministry to kindly consider the proposed additions and modifications at the 5-digit and 7-digit levels. These changes would enable more accurate and meaningful capture of production and market statistics for the plywood and wood-based panel industry.

Thanking You,



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Representation - Melamine Availability

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

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FIPPI/DCPC/2026-27/02 September 15, 2026

To,

1. Shri Tejveer Singh, IAS
Secretary
Department of Chemicals and Petrochemicals
Ministry of Chemicals and Fertilizers
Kartavya Bhawan-2, New Delhi

2. Shri Amardeep Singh Bhatia, IAS
Secretary
Department for Promotion of Industry and Internal Trade
Ministry of Commerce and Industry
Vanijya Bhawan, New Delhi

3. Shri Rajesh Agrawal, IAS
Secretary
Department of Commerce
Ministry of Commerce and Industry
Vanijya Bhawan, New Delhi

4. Shri Arvind Shrivastava, IAS
Secretary
Department of Revenue
Ministry of Finance
Kartavya Bhawan - I, New Delhi

Subject: Representation for Ensuring Competitive Availability of Melamine for the Downstream Plywood and Wood-Based Panel Industry

Respected Sir,

At the outset, we wish to respectfully draw your kind attention to the recent proposal for imposition of a Minimum Import Price (MIP) and Anti-Dumping Duty (ADD) on melamine (HSN 29336100). While melamine is a critical input used in the manufacturing of plywood and other wood-based panel products, its domestic production is limited to a single producer – Gujarat State Fertilizers & Chemicals Ltd. (GSFC). The issue is further compounded by the fact that GSFC's melamine production did not sufficiently increase to meet the growing demand from downstream industries despite ADD being in force for nearly 17 years, from 2004 to 2021. Consequently, imports have continued to rise, increasing the downstream industry's reliance on imported melamine. The details are annexed as ***Annexure I.***

2. It is important to highlight that international trade data indicates that China supplies melamine across a broad and diversified range of global markets, rather than being disproportionately focused on India. Further, a comparison of China's export unit prices across major destination markets shows that the prices applicable to India are broadly comparable with those prevailing in several other countries, with certain markets receiving supplies at similar or even lower prices. Thus, when viewed in the context of China's wider international export pattern, the price applicable to India does not appear materially lower than that observed across comparable destination markets, thereby not indicating any India-specific pattern of abnormal pricing. The details are annexed as ***Annexure II.***

3. The domestic plywood and wood-based panel industry faces a structural cost disadvantage due to its reliance on relatively higher-cost, agroforestry-sourced timber/imported timber, while competing countries have access to timber at comparatively lower costs through forest leasing arrangements. This creates a cost advantage for imported finished products and increases the risk of imports substituting domestic production. Although the recently enforced QCOs have helped moderate imports, the growing number of foreign manufacturers holding BIS licenses is supporting rise of imports from last 2 quarters. In such a scenario, any further increase in the cost of melamine would further erode the competitiveness of Indian manufacturers and increase the risk of imported products substituting domestic production.

4. The industry uses three principal resin systems – namely Urea-Formaldehyde (UF), Melamine-Formaldehyde (MF) and Phenol-Formaldehyde (PF), depending on the end-use and performance requirements of the products. However, amidst supply-chain disruptions in technical-grade urea, arising from the West Asia crisis, the industry is increasingly exploring and adopting urea-free adhesive systems. It is important to emphasize that newer resin formulations incorporate materials such as soy protein, flour, melamine, lignin and starch in melamine formulation. As the use of these formulations expands, the requirement for melamine in the industry is also expected to increase.

5. In view of the above, FIPPI requests that the availability and cost of critical chemical inputs required by the industry should not be disturbed through measures such as MIP or ADD. Rather, FIPPI has consistently advocated for reducing the Basic Customs Duty (BCD) on critical chemical inputs – namely, technical-grade urea (HSN 31021090), melamine (HSN 29336100) and phenol (HSN 29071110) – to 0%, to enhance the competitiveness of Indian products and support their export potential.

We trust our representation will receive your favourable consideration.

Thanking You,



Rajesh Mittal
President
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Representation - Antidumping Investigation on Melamine

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

1005, VIKRANT TOWER, 4, RAJENDRA PLACE, NEW DELHI110 008, INDIA
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Mr. Sajjan Bhajanka	Mr. S.P. Mittal Mr. M.S. Vagh Mr. N.K. Aggarwal	Mr. Rajesh Mittal	Mr. Jaydeep Chitlangia	Mr. Jikesh Thakkar Mr. Keshav Bhajanka	Dr. M.P. Singh

FIPPI/Commerce/2026-27/03 24 September 2026To,

To,
Shri Rajesh Agrawal, IAS
Secretary
Department of Commerce
Ministry of Commerce and Industry
Vanijya Bhawan, New Delhii

Subject: Representation Regarding the Ongoing Anti-Dumping Investigation on Melamine – Concerns Regarding Disclosure, Natural Justice and Downstream Industry Interest

Respected Sir,

At the outset, we wish to draw your kind attention to the ongoing anti-dumping investigation concerning imports of Melamine (HSN Code 29336100) originating in or exported from China PR, initiated vide Notification F. No. 6/40/2025-DGTR dated 29th September 2025 on the application of Gujarat State Fertilizers & Chemicals Limited ("the applicant"). FIPPI had earlier submitted its representation Ref. No. FIPPI/ADD1/Melamine/2025-26 dated 3rd November 2025 ***(annexed as Annexure I),*** highlighting the critical importance of Melamine for the downstream plywood and wood-based panel industry.

The investigation has now reached the **Disclosure Statement stage**, and FIPPI has submitted its detailed Comments on the Disclosure Statement dated 23rd September 2026, ***enclosed as Annexure II.*** In continuation thereof, we respectfully bring the following key concerns to the attention of the Ministry:

a. The Disclosure Statement does not disclose several essential numerical parameters and computations underlying the proposed findings. This is particularly significant in view of the judgments of the Hon'ble Gauhati High Court in Century Plyboards (I) Ltd. & Anr. v. Union of India & Ors., WP(C) No. 6568/2017 dated 26 August 2019, Century Plyboards (I) Ltd. (Review), Review Pet. No. 9/2020 dated 6 April 2022 ***(annexed as Annexure III),*** and Gujarat State Fertilizers and Chemicals Ltd. v. Century Plyboards (I) Ltd. & Ors., I.A.(Civil) No. 2414/2022 dated 21 June 2023 ***(annexed as Annexure IV),*** concerning disclosure of essential facts and numerical parameters in anti-dumping proceedings. The present disclosure therefore raises serious concerns regarding transparency and Natural Justice.

b. The disclosed price indicators also require careful examination. The Disclosure Statement records **negative price undercutting,** while the domestic industry's selling price declined by approximately 54%, against a 49% decline in landed import prices; its export selling price also declined by approximately 53% in markets where subject imports have no role.

This indicates a broader international price cycle, which is also reflected in the EU's findings on Melamine, ***enclosed as Annexure V.*** Further, 2021-22, the base year, coincided with the peak of this price cycle and included six months of anti-dumping duty on imports from China PR, making its suitability for injury assessment important to examine.

c. The increase in subject imports also needs to be seen alongside substantial growth in domestic demand and replacement of third-country imports. Further, the decline in domestic sales was almost matched by an increase in exports, while the decline in production and capacity utilisation coincided with the suspension of two older plants having a combined capacity of 15,000 MT. These factors require due consideration before establishing a causal link between subject imports and the injury alleged.

d. Melamine is an essential input for the downstream plywood and wood-based panel industry, while GSFC remains the sole domestic producer and domestic production has not kept pace with downstream requirements despite the earlier anti-dumping duty regime. **FIPPI would also like to place on record that, despite being the sole domestic producer of Melamine, GSFC has resorted to denying the supply to downstream manufacturers who have raised concerns against it in earlier proceedings,** thereby leaving such users dependent on alternative sources for their requirements. Further, approximately three-fourths of subject imports would attract the residual injury margin of 50–60%, with significant implications for downstream manufacturers, particularly MSMEs. These aspects merit careful consideration while assessing the broader Indian Industry Interest.

In view of the above, FIPPI respectfully requests the Ministry to consider the concerns raised herein and ensure that no anti-dumping duty is imposed on imports of Melamine from China PR, particularly in view of the issues relating to disclosure, injury and causation, and the significant implications for the downstream industry.

We shall be grateful for the Ministry's kind consideration.

Thanking You,



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

Uttar Pradesh Agroforestry-Based Wood Industry Promotion Policy 2026

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY
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FIPPI/Policy-04/2026-27 14 July 2026

To,
Shri Deepak Kumar
IAS Infrastructure & Industrial Development Commissioner (IIDC) &
Chief Executive Officer,
Invest UP Government of Uttar Pradesh, Lucknow

Shri. K. Vijayendra Pandian
Commissioner and Director of Industries
Government of Uttar Pradesh
Lucknow

Subject: Submission of Draft - Uttar Pradesh Agroforestry-Based Wood Industry Promotion Policy, 2026

Respected Sir,

We sincerely thank you for convening the Investment Interaction with the plywood and wood-based panel industry on 22 June 2026 in Lucknow. The meeting provided an excellent platform for meaningful engagement between the Government of Uttar Pradesh and industry stakeholders to discuss investment opportunities and the future growth of the sector in the State.

We highly appreciate the State Government's proactive vision towards promoting agroforestry-based industries and the decision taken regarding the formulation of a dedicated policy for the plywood and wood-based panel industry. This initiative reflects the State's commitment to sustainable industrial development, value addition to agroforestry resources, employment generation, and enhanced farmer incomes.

In this regard, FIPPI is pleased to submit herewith a Draft - Uttar Pradesh Agroforestry-Based Wood Industry Promotion Policy, 2026 for your kind consideration. The draft policy aims at strengthening the entire agroforestry value chain, encouraging investments, ensuring ease of doing business, promoting sustainable raw material availability, enhancing value addition, and positioning Uttar Pradesh as the leading hub for the plywood and wood-based panel industry in India.

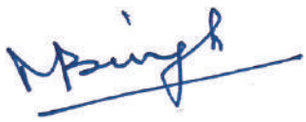
We believe that the proposed policy will not only attract substantial domestic and international investments but will also generate large-scale employment, create sustainable market linkages for farmers, promote agroforestry plantations, and significantly contribute to the State's industrial and economic development.

FIPPI would be honoured to further extend its full technical and industry support during the policy formulation process.

We look forward to your kind consideration and remain available for any further discussions or clarifications.

Thanking you.

Yours sincerely,



Dr. M.P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

Draft
Uttar Pradesh Agroforestry Based Wood Industry Promotion Policy (2026)

1. Preamble

WHEREAS the Government of India adopted the National Agroforestry Policy in 2014 to improve the productivity, employment, income and livelihood opportunities of rural households, especially smallholder farmers, through Agroforestry.

WHEREAS Industrial Products such as Plywood, Particle board, Fibre Boards (MDF, HDF), Glue laminated Timber (GLT), Cross laminated Timber (CLT), Oriented Strand Board (OSB) etc. emerged as the Engineered Wood Substitutes for natural solid timber.

WHEREAS Wood-based Industries manufacturing these Engineered Wood Substitutes have transitioned to sourcing their raw material from wood grown under Agroforestry, rather than from forests, over the last 3 decades.

WHEREAS the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India vide Resolution dated 11th November, 2016 had issued the Wood Based Industries (Establishment and Regulation) Guidelines, 2016, which were amended vide Resolution dated 11th September, 2017.

WHEREAS the MoEF&CC's Wood Based Industries (Establishment and Regulation) Guidelines, 2016 as amended in 2017 provide that industries exclusively utilizing Agroforestry and plantation-grown timber are exempt from licensing requirements and need only register with the State Forest Department. This reform was introduced to promote Agroforestry, facilitate ease of doing business, and encourage investment in sustainable Wood-Based industries.

WHEREAS the Wood Based Industries ("WBI") have played an important role in promoting Agroforestry and in bolstering the economy in Andhra Pradesh, Gujarat, Punjab, Haryana, Kerala and Uttarakhand.

WHEREAS in the present scenario, all wood, whether produced from forests or agricultural fields, falls under the same category. Farm wood should fall under a distinct category. Wood from agricultural lands or farms, and industries based on such raw materials should be free from the requirement of licensing, as long as such industries are registered and procure wood from legitimate sources with IT-based traceability.

WHEREAS the plywood and wood-based panel industry, including plywood, Medium Density Fibreboard (MDF) and particle board, has witnessed sustained growth across the country, with plywood production increasing from approximately 10 million cubic metres to 11.5 million cubic metres, supported by investments exceeding ₹3,000 crore towards capacity creation and expansion after the implementation of Quality Control Orders for such products in 2025.

WHEREAS the State of Uttar Pradesh is committed to creating a conducive policy and regulatory framework for the promotion and development of Agroforestry-based WBIs so as to facilitate sustainable industrial growth, encourage value addition to farm-grown timber, and strengthen forward and backward linkages across the Agroforestry value chain;

WHEREAS the State of Uttar Pradesh has a high potential for expanding agroforestry over agricultural land owing to its extensive fertile alluvial soils spread across the Indo-Gangetic Plains. Further, approximately 8,977.57 square kilometres of wasteland have been identified as suitable for agroforestry interventions, as per NITI Aayog (2024), thereby providing significant opportunities for increasing tree cover outside forests and augmenting the sustainable supply of raw material for WBIs;

NOW, THEREFORE, considering the substantial potential for sustainable industrial development, employment generation, enhancement of farmers' income, value addition to farm-grown timber, and promotion of Agroforestry, the Government of Uttar Pradesh recognises Agroforestry Based Wood Industries as focus sector driving economic growth and development in the state and considers it expedient to establish an enabling and dedicated policy framework suited to the needs of that sector and modify existing policies suitably, if required.

2. Objective and targets of the Policy:

The principal objective of this Policy is to establish Uttar Pradesh as the leading manufacturing hub for Agroforestry-based Plywood, Panel and Value-added Wood Products while promoting sustainable agroforestry and strengthening the entire wood value chain.

The specific objectives of the Policy are as follows: –

a. To establish Uttar Pradesh as the preferred destination and leading manufacturing hub for the plywood, panel and allied wood-based industry.

b. To attract substantial private investment in Agroforestry-based Wood Industries across the State.

c. To generate large-scale direct and indirect employment opportunities in the agroforestry and wood-based industry sector.

d. To enhance and progressively double the income of farmers by promoting commercial agroforestry and ensuring remunerative value realization from farm-grown timber.

e. To promote large-scale tree plantation on agricultural and other non-forest lands, thereby contributing towards achieving the National target of 33% tree and forest cover.

3. General Conditions

3.1 The Wood Based Agroforestry Industry Policy, Uttar Pradesh–2026 shall come into force from the date of its notification by the Government of Uttar Pradesh and shall remain in force for a period of five (05) years or until amended or superseded by the Government.

3.2 The incentives and facilities provided under this Policy shall be applicable to eligible Agroforestry-based Wood Industries established in accordance with the provisions of the MoEF&CC's Wood Based Industries (Establishment and Regulation) Guidelines, 2016, as amended in 2017 irrespective of other applicable laws and regulations in the state.

3.3 The incentives under this Policy shall be in addition to the incentives and benefits available under the schemes of the Government of India or the Government of Uttar Pradesh, unless otherwise specifically provided.

3.4 The incentives and facilities under this Policy shall be applicable to both new Agroforestry-based Wood Industries and existing industries undertaking expansion, diversification or modernization, subject to the conditions prescribed under this Policy.

3.5 Eligible units shall maintain proper digital records relating to procurement, processing and utilization of farm-grown timber and comply with all applicable statutory provisions relating to registration, environmental protection, labour laws and taxation.

4. Specific Conditions with Definitions

Under this Policy and the Rules framed hereunder, unless the context otherwise dictates or requires explicitly:

a. **'Act'** refers explicitly to the Indian Forest Act, 1927 (Central Act 16 of 1927) and rules made therein as amended from time to time in its application to the State of Uttar Pradesh giving effect to MoEF&CC's Wood Based Industries (Establishment and Regulation) Guidelines, 2016, as amended in 2017.

b. 'Competent Authority' means the jurisdictional Deputy Conservator of Forests (DCF) or the Divisional Forest Officer (DFO) holding administrative charge of the respective Territorial Forest Division where the agroforestry based industrial unit proposed to be established and registered.

c. 'Farm Wood' means round logs, timber, poles, roots, or any other structural wood form completely planted and harvested from private agricultural farmlands, revenue lands, boundary plantations, or areas clearly falling outside notified forests, consisting explicitly of tree species exempted from felling and transit regulations by the State Government.

d. 'Registration' means a formal, legal, and digitally generated acknowledgement certificate granted by the competent authority on its designated online portal, authorizing the establishment and operation of an Agroforestry Wood Based Industry without the requirement of a conventional forest department license.

e. 'Wood Sectoral Committee' or 'WSC' refers to the Apex Committee, tasked with the development, monitoring, and oversight of Wood-Based industrial regulations and industrial capacity distribution across the State.

f. **'Agroforestry Based Wood Industry'** means any industrial processing plant, corporate manufacturing unit, or Micro, Small, and Medium Enterprise (MSME) that utilizes Farm Wood or explicitly exempted Agroforestry tree species as its primary raw material. This definition covers saw mills, veneer mills, plywood manufacturing units, standalone slicing units, standalone pressing units, pelletization plants, blockboard units, and particle board/MDF plants.

g. **'New Unit'** shall mean an Agroforestry-based Wood Industry established in the State after the notification of this Policy

and commencing commercial production during theoperative period of the Policy.

h. **'Expansion/Diversification Unit'** shall mean an existing Agroforestry-based Wood Industry undertaking expansion, diversification or modernization by making a minimum additional investment of 25% of the existing Gross Fixed Capital Investment in plant and machinery and increasing its installed production capacity by at least 25%.

5. Incentives

5.1 Land Cost Subsidy

a. Land cost subsidy shall be provided to the Agroforestry Based Wood Industry units, on purchase of land in industrial areas developed by the Government Agencies/Department and other development authorities. A subsidy of 25% of land cost will be reimbursed to investors who buy land directly from such Government agencies. In Gautam Budh Nagar district, this subsidy will be 15% of land cost. The subsidy will however, be limited to 10% of the total project cost and only 10% of the effective land cost will be included while estimating the project cost.

b. This reimbursement of land cost subsidy will be made only when the unit starts commercial production within five years of buying the land

5.2 Stamp Duty Exemption

Land purchased or taken on lease from the State or Central Government, or their undertakings (Corporation/ Council/Board/Company/Institution) will be eligible for exemption from stamp duty (on submission of Bank Guarantee). The Bank Guarantee will be released after the start of commercial production by the unit and Joint inspection by Project Monitoring Committee and the Department of Stamp & Registration, Government of Uttar Pradesh

a. Agroforestry based Wood Industry Unit to be set up in the state (except Gautam Budh Nagar district) will be entitled for 100% exemption of stamp duty. In Gautam Budh Nagar district, 75% of stamp duty will be exempted.

b. Land purchased in any part of the State for the development of infrastructure facilities (Such as Integrated Transport & Commercial Centre, Exhibition Centre, Warehouse, Water-Supply, Sewage lines, Sewage Treatment Plant, Solid Waste Management Plant, Effluent Treatment Plant) for Agroforestry based Wood Industry will be eligible for 100% exemption of stamp duty.

c. Calculation of stamp duty exemption will be based on the prevailing circle rates as on the date of purchase of land for all of the above.

5.3 Capital Subsidy

A Capital Subsidy of 25 percent of the investment made on purchase of Plant and Machinery will be reimbursed to the units, which generates minimum employment of 50 jobs. In addition to the above, reimbursement of additional capital subsidy at the rate of 10 percent will be provided to the units set up in Poorvanchal and Bundelkhand region of the state.

5.4 Subsidy for Infrastructure

a. Subsidy of 50% of the project cost for developing infrastructural amenities for self-use such as (i) Road, (ii) Drainage & Water Supply, (iii) Power Supply (power line, transformer etc.).

b. Subsidy of 50% of the project cost for establishment of Effluent Treatment Plants (ETPs) and DG Sets,. The ETP and DG Set should be as per norms set up by the Central Pollution Control Board (CPCB), National Green Tribunal (NGT) or any statutory body of Government of India / Uttar Pradesh. This subsidy will be provided only in case of set up of unit on undeveloped land parcels

c. Subsidy of 25% of the project cost will be reimbursed, for developing an In-house training facility, Testing laboratory, Quality Certification Labs, R&D Centre.

d. Subsidy of 25% of the project cost will be reimbursed, for construction of staff-quarter, worker's hostel/ dormitory.

e. The cost of land shall not be considered as part of the project cost for the purpose of subsidy for Infrastructure.Subsidy of 50% of the project cost for establishment of Effluent Treatment Plants (ETPs)

5.5 Incentives relating to Energy

a. 100% exemption from electricity duty will be given to the new units for a period of 10 years.

b. Electricity produced by new units, from Captive Power Plants and used for selfconsumption, will be exempted from electricity duty for a period of 10 years.

c. New industrial units shall be provided reimbursement of Power Tariff of Rs. 2/unit for a period of 10 years from the date of commencement of commercial production.

5.6 Employment Generation Subsidy

a. Mega and Super Mega units act

as anchor industries, and they function as drivers for regions and lead to springing up of smaller ancillary units and development of areas around them. The State Government will give Employment Generation Subsidy to such Mega and Super Mega units.

b. Mega and Super Mega Units are defined on the basis of "Investment on Plant & Machinery" and "Employment Generation" as per the following criteria: -

5.7 Freight Reimbursement

To promote export of plywood and panel products, 25% to 75% reimbursement of freight cost of the container from unit to port, will be provided to new units, for a period of 5 years as per table below. The units which are availing freight related incentives under the U.P. Export Promotion Policy, will not be eligible for the Freight Reimbursement under this policy. However, the units will be eligible for incentives under other relevant categories of U.P. Export Promotion Policy.

6. Ease of Doing Business

a. P**lug and Play Infrastructure:** The state government will promote cluster-based development by means of developing Plug and Play infrastructure and flatted factories with the necessary infrastructure, to enable the industry by reduction of initial capital in land, enhanced quality and overall competitiveness. These Plug & Play facilities will be offered to industries on rental/ short term lease basis to reduce their upfront investment in land and help them to invest more capital in technology.

b. Dedicated Industrial Cluster: Government will facilitate private players in land acquisition outside the notified areas of Industrial Development Authorities, Housing Development Authorities, Urban Local Bodies or other notified areas for development of Dedicated Industrial Cluster of more than 50 acres and having minimum of 5 units with no single unit occupying more than 80% of the total allocable area for industrial use on the lines of general policy of Private Industrial Park in consultation with Wood Sectoral Committee.

c. Integrated Incentive Management System: An integrated incentive management system (online portal) will be developed to accept paperless applications for investments made under the policy and to ensure that evaluation of proposals received are done in a time bound manner and disbursement of incentives is streamlined. The investors will be able to track real time status of their investment proposal at this online portal. The incentive amount will be disbursed after the approval of eligible incentive amount by the state government, at the earliest.

d. Dedicated Investors Helpdesk: A dedicated team will be formed to handhold the investors with their queries on the policy benefits, easing their investment process and support to investors at every step.

e. **Attracting Anchor Units:** The state aims to attract large players in the agroforestrybased wood sector, who can act as an anchor unit and engage with the existing players to integrate supply chain for operational efficiencies. The state will exhibit the tremendous investment opportunities in various national/international destinations to to attract investment from foreign investors.

7. Wood sectoral committee

The Forest Department, Government of Uttar Pradesh, in coordination with the concerned Departments and agencies, shall appoint a Wood Sectoral Committee ("WSC") comprising professionals for effective implementation of this Policy. The WSC shall assist the State Government in policy implementation, promotion of investment in Agroforestry-based Wood Industries, facilitation of investors, and coordination with stakeholders across the Agroforestry value chain. The WSC shall discharge the following functions:

a. **Handholding with the State Government:** The WSC shall assist the State Government in drafting rules, operational guidelines, statutory amendments, Standard Operating Procedures (SOPs) and other necessary documents for effective implementation of the Wood Based Agroforestry Industry Policy and the Wood Based Industries (Establishment and Regulation) Guidelines, 2016, as amended from time to time.

b. Development of Marketing Collaterals: The WSC shall assist in developing investment promotion material, including brochures, investment profiles, sector reports, presentations, digital content and other publicity material highlighting the advantages of investing in Uttar Pradesh's Agroforestry-based Wood Industry. The material may be customized for different industry segments such as plywood, veneer, block boards, flush doors, laminates, MDF, particle board, engineered wood products and allied industries.

c. Information Dissemination on State Policy: The WSC shall assist the State Government in organizing

roadshows, investor meets, workshops, seminars, awareness programmes, media campaigns and stakeholder consultations to disseminate information regarding the Policy and promote investment opportunities in the State. The WSC shall also facilitate participation in national and international exhibitions, trade fairs and investment summits related to agroforestry, forestry and wood-based industries.

d. **Identification of Prospective Investors:** The WSC shall identify prospective domestic and international investors for establishment of Agroforestry-based Wood Industries across the entire value chain, including plantations, timber processing, veneer, plywood, laminates, engineered wood products, MDF, particle board, furniture manufacturing and other value-added wood products.

e. **Coordination with Prospective Investors:** The WSC shall establish direct engagement with prospective investors, facilitate business meetings, coordinate investor visits, provide necessary information regarding investment opportunities, and assist in obtaining approvals and registrations from the concerned Departments. The WSC shall also facilitate follow-up with investors to ensure timely establishment of projects in the State.

f. **Assistance in Mobilization of Proposals under Various Schemes:** The WSC shall assist the State Government in inviting, scrutinizing and processing proposals submitted under this Policy and other relevant schemes of the Government of India and Government of Uttar Pradesh. It shall also provide guidance to investors regarding eligibility conditions, documentation and procedural requirements.

g. **Evaluation and Appraisal of Project Reports:** The WSC shall assist the State Government in evaluation and appraisal of Detailed Project Reports (DPRs), technoeconomic feasibility reports and other project proposals submitted by investors for availing benefits under this Policy.

h. **Monitoring and Reporting:** The WSC shall assist the State Government in monitoring the implementation of approved projects, assessing the progress of investments, employment generation, plantation development and capacity creation, and shall submit periodic progress reports and recommendations for effective implementation of the Policy.

8. Wood sectoral committee

8.1 Date of Production (DoP)

All industrial units must obtain the Certification of Date of Production (DoP) from competent authority for availing benefits under this policy. The Udyog Aadhaar or Udyam will not be sufficient to substitute the DoP certificate.

The "Date of Production" of an industrial unit shall mean the date on which the unit actually commences commercial production of the item for which the unit has been registered. An industrial unit that becomes eligible may submit a DoP application within one month of the commencement of production, as envisaged in the DPR. MSME units will get a maximum of six months' relaxation of time for submission of the DoP application. However, the application has to be submitted with expressed reason duly supported by documentary proof. The Director of Industries shall have the power to condone delay of up to 6 months, and the Principal Secretary/ Secretary of Industries shall have the power to condone delay of up to 1 year. Any delay beyond one year shall be referred to the Departmental Minister for delay condonation.

8.2 Procedure for operationalization of the provision of the policy

Implementation of various provisions covering the incentives, concessions etc. will be subject to the issue of detailed guidelines / statutory notifications, wherever necessary in respect of each item by the concerned Administrative Department.

8.3 Policy Period

The State Government may at any time amend any provision of this policy. Normally, the Policy will remain operational for 5 years.

8.4 Doubts Resolution

a. Doubts relating to interpretation of any term and / or dispute relating to the operation of any provision under this Policy shall have to be referred to the Industries Department, Government of Uttar Pradesh, for clarification/resolution, and the decision of the Department in this regard shall be final and binding on all concerned.

b. In case of any doubt the "English Version" of the policy will be considered an authentic version.

8.5 Power of the State Government

Notwithstanding anything contained in the foregoing paragraphs of this policy, the State Government by issuance of notification in the official gazette may amend or withdraw any of the provisions and / or the schemes mentioned herein above.

FIPPI Representation MoEF&CC Captive Resin Manufacturing

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

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FIPPI/Policy-06/2026-27 2 September 2026

To,
The Hon'ble Minister
Ministry of Environment, Forest and Climate Change
Government of India
Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi – 110 003

Subject: Allowing integrated wood-panel manufacturing units to manufacture resin up to 300 TPD for captive/in-house consumption - Request for appropriate dispensation from prior Environmental Clearance from MoEF&CC.

Respected Hon'ble Minister,

This is with reference to the discussion held on 21st August 2026 and the letter submitted regarding the key challenges and policy concerns faced by the plywood and wood-panel industry. In continuation thereof, FIPPI respectfully submits this representation including the issue, proposed solution and justification concerning the requirement of prior Environmental Clearance (EC) for setting up captive/in-house resin manufacturing facilities by existing wood-based panel manufacturing units.

1. ISSUE

At present, captive/in-house resin manufacturing facilities established by existing wood-based panel manufacturing units attracts the provisions of Item 5(f) – Synthetic Organic Chemicals under the EIA Notification, 2006 entailing public hearing, scoping, public consultation and appraisal, which are not proportionate or practical for captive resin unit established within an existing plywood, MDF, particleboard or laminates manufacturing facility solely for captive consumption. Therefore, many of the manufacturing units are not in a position to go for the resin production facility for their consumption. The sourcing from market creates quality and traceability issues incurring higher procurement costs.

The wood-based panel industry requires captive resin manufacturing facilities within existing industrial premises to meet its internal requirements. Therefore, a distinction needs to be made between a standalone commercial synthetic chemical/resin manufacturing plant and an integrated manufacturing unit for captive resin consumption.

2. SOLUTION

FIPPI respectfully requests the Ministry to provide an appropriate dispensation from the requirement of prior Environmental Clearance for captive/in-house resin manufacturing units established by existing wood-based panel industries, preferably up to 300 TPD, subject to appropriate environmental safeguards, emission standards, pollution-control measures and statutory conditions.

The dispensation may be restricted to facilities which:

- are located within the premises of an existing wood-based panel manufacturing unit;
- manufacture resin exclusively for captive consumption;
- do not sell or distribute resin commercially; and
- maintain appropriate pollution-control and safety systems.

Alternatively, the Ministry may consider introducing a separate category under the EIA framework for "Captive Resin/Adhesive Manufacturing Units for Wood-Based Panel Industries" (Plywood, MDF, particleboard or laminates), with an appropriate capacity threshold.

3. JUSTIFICATION

- Captive resin is an essential intermediate and input for the principal wood-based panel manufacturing activity and is not produced for commercial sale.
- The manufacturing process can be designed as a substantially closed process with zero or negligible process wastewater. The facility can therefore be operated on a Zero Liquid Discharge (ZLD) or noprocess- effluent basis.
- Captive resin facilities can incorporate closed reactors, emission-control measures and appropriate air-pollution-control systems, while complying with requirements relating to air emissions, fugitive emissions, chemical handling, occupational health and safety, hazardous waste and fire safety.
- Captive production can reduce transportation of resin and chemical materials, minimise packaging requirements and associated waste, reduce transportation and storage risks.
- Recognising clean and sustainably sourced biofuel/biomass fuel along with gaseous fuel would encourage the adoption of cleaner fuels, subject to prescribed emission standards and pollutioncontrol systems.

FIPPI, therefore, requests your good office to kindly consider the above representation and issue appropriate directions/ clarification to the concerned authorities for providing the proposed dispensation or, alternatively, for creating a specific regulatory category for captive/in-house resin manufacturing facilities of wood-based panel industries up to 300 TPD, subject to suitable environmental safeguards.

FIPPI also requests the Ministry to amend/clarify Sl. No. 143 of the MoEF&CC letter dated 15 January 2025 concerning synthetic resin manufacturing, to expressly recognise clean and sustainably sourced biofuel/biomass fuel, along with gaseous fuel, as an eligible fuel for classification under the Orange Category, subject to prescribed emission standards and appropriate air-pollution-control systems.

We shall be grateful for your kind consideration and favourable action in the matter.

Thanking You,,



Jaydeep Chitlangia
Senior Vice President
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Request for Implementation of Karnataka Agroforestry Based Wood Industry Promotion Policy 2026

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY

REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969

1005, VIKRANT TOWER, 4, RAJENDRA PLACE, NEW DELHI110 008, INDIA
Phone No.: +91-11-2575 5649 • **E-mail:** fippi@fippi.org • **Website:** www.fippi.org

Chief Patron	Patrons	President	Senior Vice President	Vice Presidents	Director General
Mr. Sajjan Bhajanka	Mr. S.P. Mittal Mr. M.S. Vagh Mr. N.K. Aggarwal	Mr. Rajesh Mittal	Mr. Jaydeep Chitlangia	Mr. Jikesh Thakkar Mr. Keshav Bhajanka	Dr. M.P. Singh

FIPPI/Policy-06/2026-27 22 SEPTEMBER2026

To,
The Commissioner of Industrial Development &
Director of Industries & Commerce
Department of Industries & Commerce
Government of Karnataka
Bengaluru – 560001

Subject: Request for Implementation of Karnataka Agroforestry Based Wood Industry Promotion Policy

Madam,

The Federation of Indian Plywood & Panel Industry (FIPPI), the apex national body representing India's plywood, Medium Density Fibreboard (MDF), particle board, laminates, veneer and allied wood-panel manufacturing industry, has been actively working with the Central and State Governments to promote sustainable industrial development, agroforestry, and a robust farmer-industry timber value chain across the country.

Over the past three decades, India's wood-panel industry has evolved into one of the country's strongest examples of sustainable industrial development by transitioning entirely from forest based to farm-grown timber under agroforestry systems, reducing pressure on natural forests while strengthening a farmer-driven raw material ecosystem.

The sector has witnessed remarkable growth in recent years. Plywood production has increased by nearly **15%,** rising from 10 million cubic metres to **11.5 million cubic metres.** The industry has attracted investments exceeding **₹3,000 crore,** with several companies undertaking capacity expansion. The sector is now poised to fully utilise its installed capacity of 1**2 million cubic metres** in plywood, along with **4 million cubic metres** each in Medium Density Fibreboard (MDF) and Particle Board. Further, the consumption of plywood and panel products is projected to **double by 2030**, underscoring the sector's immense potential for future investment and employment generation.

Recognizing the potential of the sector, progressive States such as **Andhra Pradesh** and **Gujarat** have adopted a facilitative regulatory framework by keeping Agroforestry-based Wood Industries outside the conventional licensing regime. As a result, leading manufacturers including **Century Plyboards, Greenpanel Industries, Greenlam Industries, Greenply Industries and Action TESA** have established major manufacturing facilities in these States, attracting substantial investments, generating employment, and creating strong farmer-industry linkages.

The establishment of these industries has also contributed significantly to improving the ecological landscape of these States. The presence of assured markets has encouraged farmers to undertake commercial tree plantations, thereby expanding tree cover outside forests. The latest **India State of Forest Report (FSI)** indicates that the highest increase in **Trees Outside Forests (ToF), farm forestry and agroforestry,** has been observed in areas surrounding timber-based industry clusters across the country. This has also been demonstrated in practice. Following the establishment of Greenply's MDF manufacturing plant in Gujarat during 2022–23, the company undertook large-scale farm forestry plantations in partnership with local farmers. Remote sensing-based monitoring conducted in 2025 reported a 2**4% increase in green cover** across four adjoining districts. Beyond enhancing green cover, the initiative has contributed to increased farmer incomes through commercial timber plantations and carbon credit opportunities. Greenply, along with the other Agroforestry-based Wood Industry, intends to replicate similar initiatives in Karnataka, demonstrating how industry-led agroforestry can simultaneously drive economic growth, farmer prosperity and environmental sustainability.

Karnataka possesses exceptional natural advantages for the development of this sector. The State's diverse agro-climatic conditions are ideally suited for commercially important agroforestry species such as *Melia dubia,* Silver oak, Teak, Acacia, Casuarina, and Subabul, providing a strong foundation for a sustainable wood-based industry ecosystem.

However, despite these inherent strengths, Karnataka has not been able to fully realise these opportunities due to the absence of a dedicated policy framework. The State is losing Agroforestry-based Wood Industries to neighbouring States that offer a more conducive regulatory framework, resulting in the loss of investments, employment opportunities, and value addition within Karnataka.

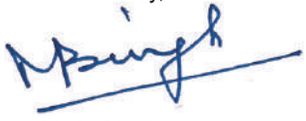
The impact extends beyond industry. Farmers cultivating exempted timber species such as *Melia dubia,* Silver Oak and other farm-grown timber are often compelled to sell their produce at lower prices due to the limited availability of organised buyers within the State. This, in turn, acts as a deterrent to the adoption and expansion of agroforestry despite its proven economic and environmental benefits.

In view of the above, FIPPI humbly requests the Government of Karnataka to consider implementing the **Karnataka Agroforestry Based Wood Industry Promotion Policy.** Such a policy would attract substantial investments, generate large-scale employment, provide remunerative markets for farm-grown timber, strengthen farmer-industry partnerships, improve ease of doing business, and significantly contribute to increasing tree cover outside forests through sustainable agroforestry practices.

FIPPI is enclosing a copy of Draft Karnataka Agroforestry Based Wood Industry Promotion Policy, 2026 for your kind consideration. We would be pleased to extend our technical expertise and industry support in the implementation of the proposed policy and would welcome an opportunity to discuss the matter with your good office at your convenience.

With regards,

Yours sincerely,



Dr. M. P. Singh
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Submits Draft Proposal for West Bengal Agroforestry-Based Wood Industry Promotion Policy, 2026

FEDERATION OF INDIAN PLYWOOD & PANEL INDUSTRY
REGISTERED UNDER THE SOCIETIES REGISTRATION ACT XXI OF 1860, REGN. NO. S/2985/1968-69 DT. 4.1.1969
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FIPPI/Policy-08 /2026-27 29 September 2026

To,
Hon'ble Minister of Finance
Government of West Bengal,
Kolkata

Subject: Submission of Draft – West Bengal Agroforestry Based Wood Industry Promotion Policy, 2026

Respected Sir,

The Federation of Indian Plywood & Panel Industry (FIPPI) respectfully submits for your kind consideration the enclosed draft of the **West Bengal Agroforestry Based Wood Industry Promotion Policy, 2026.**

The Federation of Indian Plywood & Panel Industry (FIPPI) is the apex body and the unanimous voice of India's Plywood and Panel Industry, representing manufacturers of plywood, blockboards, flush doors, veneers, laminates, Medium Density Fibreboard (MDF), Particle Board, engineered wood products and allied industries across the country.

The Indian plywood and panel industry has witnessed remarkable growth during the past few years and has emerged as one of the fastest-growing sectors of the country's manufacturing economy. Following the implementation of the Quality Control Orders, the industry has attracted investments exceeding **₹3,000 crore** towards capacity expansion and modernization, while plywood production has increased from approximately **10 million cubic metres to 11.5 million cubic metres**. More significantly, over 90 percent of the industry's timber requirement is sourced from trees cultivated by farmers on agricultural lands under agroforestry, demonstrating that industrial growth and environmental conservation can successfully progress together while generating sustainable livelihoods for rural communities.

The continued expansion of the Indian plywood and panel industry presents a significant opportunity for progressive States to attract fresh investments and establish themselves as major manufacturing destinations. West Bengal, with its favourable agro-climatic conditions, abundant tree resources outside forests, strategic location, skilled workforce and excellent connectivity to eastern and north-eastern India, possesses all the essential attributes required to become a leading manufacturing hub for Agroforestry-based Plywood, Panel and Value-added Wood Industries. The State's vast agroforestry potential, coupled with its growing industrial ecosystem and proximity to major domestic and international markets, provides a unique opportunity to promote value addition to farm-grown timber, strengthen the entire wood value chain and emerge as a preferred investment destination for sustainable wood-based manufacturing.

Recognising this immense opportunity, FIPPI has taken the initiative to prepare the enclosed **Draft – West Bengal Agroforestry Based Wood Industry Promotion Policy, 2026** with the objective of supporting the Government of West Bengal in establishing

a comprehensive and forward-looking policy framework for the sector. The proposed policy aims to effectively leverage the continued growth of the Indian plywood and panel industry by creating an enabling ecosystem that attracts investment, promotes ease of doing business, facilitates cluster-based industrial development, strengthens the agroforestry value chain and positions West Bengal as a nationally competitive destination for sustainable wood-based manufacturing.

The proposed policy is envisioned not merely as an industrial promotion initiative but as a comprehensive framework for sustainable rural and industrial development. It seeks to harness the immense agroforestry potential of West Bengal by promoting commercial tree plantations on agricultural and other non-forest lands, creating assured markets for farm-grown timber, strengthening farmer-industry linkages and encouraging scientific agroforestry practices across the State. As an industry-led commitment towards strengthening the State's agroforestry resource base, the plywood and panel industry proposes to undertake plantation activities covering approximately **8,000–10,000 hectares** area and facilitate the plantation of around **10 crore trees annually** in West Bengal, subject to the availability of suitable land, farmer participation and an enabling policy framework. This initiative will contribute towards creating a sustainable and renewable raw-material base for the industry while simultaneously generating additional income opportunities for farmers and strengthening the State's green economy.

By creating a reliable market for agroforestry produce, the policy aims to progressively enhance farmers' incomes, generate substantial direct and indirect employment opportunities, encourage entrepreneurship, strengthen rural economies and improve the socio-economic status of farming communities. The proposed industry-led plantation programme will further strengthen the linkage between farmers and wood-based industries by providing a long-term, demand-driven ecosystem for farm-grown timber.

Simultaneously, the policy seeks to promote environmentally responsible industrialisation through increased tree cover outside forests, sustainable utilisation of renewable wood resources, enhanced carbon sequestration and long-term climate resilience. The proposed policy, therefore, establishes a balanced framework that integrates industrial development, agricultural prosperity, environmental sustainability and inclusive economic growth.

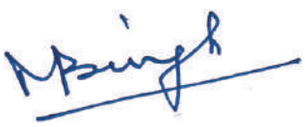
The Federation firmly believes that the adoption of this policy will position West Bengal as a preferred destination for investments in Agroforestry-based Plywood, Panel and Value-added Wood Industries, while attracting substantial private investment, creating large-scale employment opportunities, strengthening the manufacturing base of the State, promoting agroforestry plantations and contributing significantly towards balanced regional and rural development.

FIPPI would be privileged to extend its full technical expertise, policy support and industry knowledge to the Government of West Bengal during the examination, refinement and implementation of the proposed policy. The Federation remains available for any consultations, technical discussions or stakeholder interactions that the Government may consider necessary in this regard.

We sincerely request your kind consideration of the enclosed **Draft – West Bengal Agroforestry Based Wood Industry Promotion Policy, 2026**. We are confident that, under your visionary leadership, West Bengal can emerge as one of India's foremost centres for sustainable Agroforestry-based Wood Industries, generating long-term benefits for farmers, entrepreneurs, rural communities and the State's economy while contributing meaningfully to the vision of sustainable industrial development.

With highest regards.

Yours faithfully,



Dr. M. P. Singh (Retd. IFS)
Director General
Federation of Indian Plywood and Panel Industry (FIPPI)

FIPPI Seeks Policy Support for Agroforestry-Based Wood Industries in West Bengal

30th September 2026

On 30 September 2026, a delegation from FIPPI met with Dr. Swapan Das Gupta, Hon'ble Minister of Finance, Government of West Bengal, to seek support for an Agroforestry-Based Wood Industries Promotion Policy.

The delegation emphasised promoting timber plantations on agricultural land, providing incentives to farmers, simplifying regulations for timber harvesting and transportation, and ensuring sustainable raw material availability for the plywood and panel industry.

The delegation comprised:

- Shri Rajesh Mittal, President, FIPPI
- Shri Jaydeep Chitlangia, Senior Vice President, FIPPI
- Dr. M.P. Singh, Director General, FIPPI
- Shri Jinendra Jain, Senior Sustainability Advisor, FIPPI



Webinar – From Forest Resources to Global Wood Products

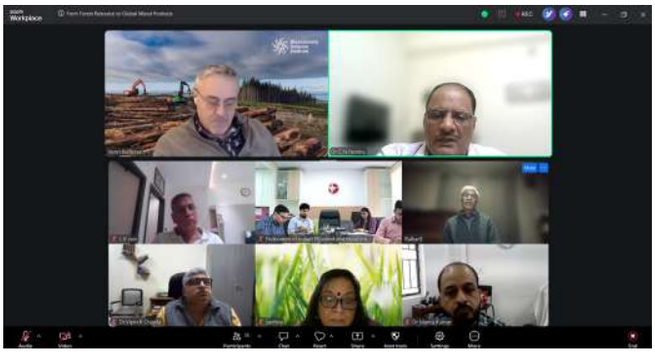
22nd September 2026

FIPPI successfully hosted an insightful webinar on "From Forest Resource to Global Wood Products", featuring Dr. Henri Bailleres, General Manager – Forests to Timber Products, Bioeconomy Science Institute, New Zealand.

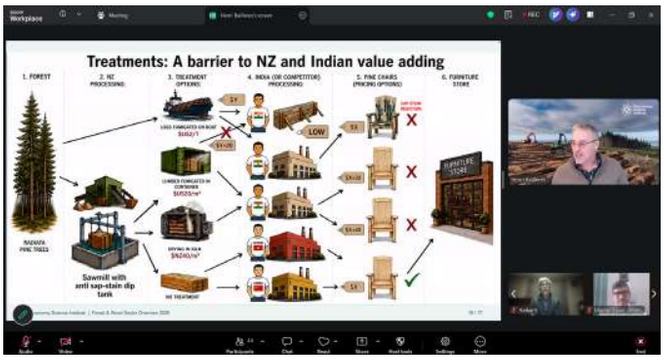
The session highlighted New Zealand's radiata pine resource, engineered wood products, advanced wood modification technologies, and emerging opportunities for stronger India–New Zealand partnerships in the wood and panel industry.

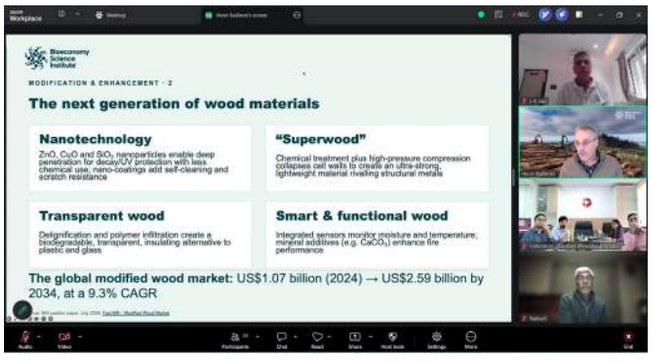
A sincere thank you to Dr. Bailleres and all participants for making the session engaging and impactful.

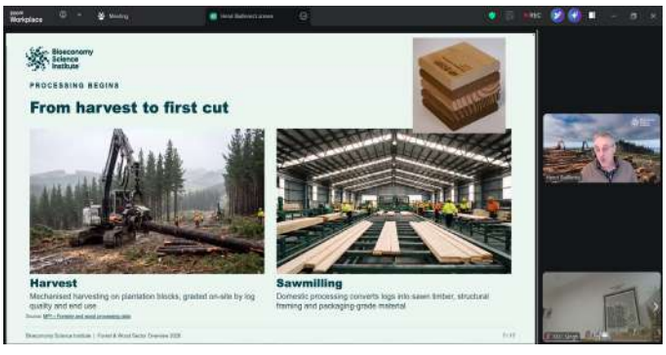


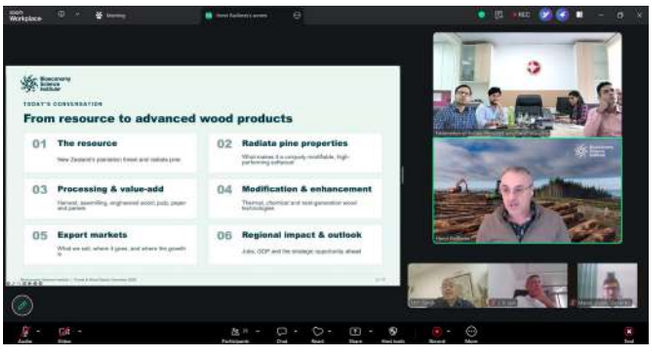












Meeting with Russian Delegation

Strengthening India–Russia Trade Dialogue for the Wood Panel Industry

10th September 2026



During INNOPROM India 2026, held as part of the BRICS Summit 2026 at Bharat Mandapam, the Federation of Indian Plywood & Panel Industry (FIPPI) led a high-level engagement with representatives of the Foreign Trade Center (FTC), Ministry of Industry and Trade of the Russian Federation.

The meeting brought together FIPPI delegates, industry leaders, and key stakeholders to discuss opportunities for strengthening trade cooperation between India and Russia in the plywood and wood panel sector.

A key focus of the discussions was understanding Russian certification requirements, quality standards, and market access mechanisms that can facilitate greater participation of Indian manufacturers in the Russian market. The dialogue also explored avenues for building resilient supply chains, fostering industry partnerships, and enhancing bilateral trade through closer institutional collaboration.

The engagement reflects FIPPI's continued commitment to creating new global opportunities for India's plywood and panel industry by connecting manufacturers with international markets and enabling informed discussions on regulatory and market requirements.

As India and Russia deepen economic cooperation under the BRICS framework, such industry-to-industry engagements will play an important role in expanding sustainable trade and long-term partnerships.





Strengthening India–New Zealand Collaboration in the Wood Sector

22nd September 2026



The Federation of Indian Plywood & Panel Industry (FIPPI) held a constructive industry dialogue with the New Zealand delegation to explore opportunities for deeper cooperation and partnership in the wood-based panel and forestry sector.

FIPPI warmly welcomed the India–New Zealand FTA as an important step towards expanding bilateral trade, investment and industry partnerships. Discussions focused on FTA opportunities and market-access challenges, timber trade and standards, and strengthening industry-to-industry cooperation.

The dialogue also covered FIPPI's proposed delegation visit to New Zealand in November 2026, with the New Zealand Embassy extending its support and guidance in facilitating the visit and relevant government and industry engagements.

FIPPI looks forward to building on this engagement and further strengthening India–New Zealand cooperation across the wood and forestry value chain.





Workshop - Draft Methodology on Carbon Accounting for Agroforestry in India

23rd September 2026

The Federation of Indian Plywood & Panel Industry (FIPPI), in collaboration with ICFRE, successfully participated in the Consultation Workshop on the Draft Methodology on Carbon Accounting for Agroforestry in India held on 23 September 2026 at Van Vigyan Bhawan, New Delhi.





The workshop brought together a distinguished group of stakeholders, including policymakers, retired Indian Forest Service (IFS) officers, scientists from leading research institutions, representatives from the Bureau of Energy Efficiency (BEE), Carbon Project Developers, and Industry leaders, to deliberate on developing a practical and scientifically robust framework for agroforestry-based carbon credits under India's Carbon Credit Trading Scheme (CCTS).

A key highlight of the workshop was the insightful presentation by Director, Bureau of Energy Efficiency (BEE), who provided a comprehensive overview of the Offset Mechanism under CCTS, highlighting its role in strengthening the Indian Carbon Market and creating new opportunities for the agroforestry sector.

This was followed by detailed technical sessions on the Draft Carbon Accounting Methodology for Agroforestry in India, led by Dr. R.S. Rawat, Scientist, ICFRE, where participants engaged in extensive discussions and offered valuable suggestions to further refine the methodology.

A strong consensus emerged that the methodology should be designed to maximize benefits for farmers by enabling them to receive carbon credits for their farm-grown timber, creating an additional source of income while encouraging wider adoption of agroforestry.

Participants also emphasized that the framework must remain industry-friendly, as wood-based industries will be at the forefront of implementing the methodology on the ground. The long-term success of this initiative will depend on seamless adoption by both farmers and industry, ensuring a transparent, practical, and scalable carbon accounting system that advances India's climate goals while strengthening sustainable timber value chains.

FIPPI remains committed to working with all stakeholders to build a robust agroforestry carbon ecosystem that promotes farmer prosperity, sustainable raw material security, and climate action.

FIPPI Signs MoU with ICFRE-IWST for Standardisation of Engineering Wood Flooring

28th September 2026



On 24 september 2026, Dr. M.P. Singh, Director General, FIPPI, and Dr. C.N. Pandey, Senior Technical Advisor, FIPPI, signed a Memorandum of Understanding (MoU) with the Institute of Wood Science and Technology (ICFRE-IWST) to develop a draft standard for engineering wood flooring. This collaboration marks an important step towards strengthening standardisation, promoting product quality and supporting the development of reliable performance benchmarks for engineered wood products in India.

In addition to the MoU signing, discussions were held on the proposed standards for fire-retardant particle boards and Medium-Density Fibreboard (MDF). The deliberations focused on the need to establish appropriate testing procedures and evaluation criteria to assess the fire-retardant properties of these products. The initiative aims to contribute to the development of standards that address industry requirements while supporting product safety, consistency and quality.

Minutes of Discussion on the Draft Proposed Standard for Fire-Retardant Particle Boards and MDF

25th - 28th September 2026

A discussion was held regarding the draft proposed standard for fire-retardant particle boards and MDF by Dr C.N Pandey, Fippi along with Dr Mamatha.B.S and Mr Anand Nandanwar scientist, ICFRE-IWST on 25th September 2026. The draft standard format, proposed test methods, and the values/criteria proposed for evaluation were reviewed in detail.

During the discussion, it was opined by Dr C.N Pandey that, an index value may be developed by considering the relative importance of the four major performance parameters. For the values instead of specifying independent limiting values for each individual criterion when tested as per ISO 5660

Subsequently, on 28th September, the same matter was further discussed in the Director's room in the presence of Director, IWST, DR.M. P Singh, Director General, FIPPI, Dr C.N Pandey, Technical Advisor, FIPPI, Ms. Sujatha D, Mr Anand Nandanwar and Dr Mamatha B.S Scientist, ICFRE-IWST

Following discussion and clarification on various aspects of the proposed standard, the Director suggested that additional sample studies should be undertaken, as the number of samples tested so far was considered insufficient for the development of a robust standard.

It was clarified for the members that, for developing an index value, the values obtained for each individual criterion would first need to be normalized, so that the different parameters can be brought onto a comparable scale before combining them into an overall index.

Further, the members present were of the opinion that, since the material under consideration is specifically a fire-retardant composite, density need not be considered and all the samples tested irrespective of the density should be considered for standardisation.

Conclusion and Further Action

The meeting concluded with the following action points:

1. Additional fire-retardant particle board and MDF samples will be collected to increase the sample size and strengthen the database.
2. Dr. C. N. Pandey will coordinate the arrangement and collection of additional samples.
3. The collected samples will be subjected to cone calorimetry testing to generate additional fire-performance data.
4. The results obtained for the identified major performance criteria will be normalized individually.
5. Based on the normalized values and considering the relative importance of the major fire-performance criteria, an overall fire-retardant performance index will be explored for incorporation into the proposed standard.
6. Density will not be considered as an independent criterion in the proposed index, as the study is focused on the fire performance of fire-retardant composite boards.

The additional experimental data and analysis will be used for further deliberation and refinement of the proposed standard.



MATECIA Exhibition 2026

20th - 23rd August 2026



The MATECIA Exhibition 2026 was held from 20 to 23 August 2026 at the Yashobhoomi Convention Centre, New Delhi, bringing together leading stakeholders, manufacturers, industry professionals, and visitors from the plywood, panels, laminates, and allied sectors.

The exhibition was inaugurated in the presence of Mr. Aman Gupta, Co-founder, boAt, who attended as the Special Guest. Mr. Rajesh Mittal, President, FIPPI and CMD, Greenply Industries, and Mr. Surinder Arora, President, ILMA and MD, Virgo Laminates, graced the occasion as Chief Guests. Their presence added significance to the inauguration and reflected the importance of the exhibition for the industry.

The FIPPI stall at MATECIA Exhibition 2026 was inaugurated by Mr. Rajesh Mittal, President, FIPPI and CMD, Greenply Industries, and Mr. Surinder Arora, President, ILMA and MD, Virgo Laminates, in the presence of Mr. Jaydeep Chitlangia, Senior Vice President, FIPPI and Mentor, Duroply, and Dr. M.P. Singh, Director General, FIPPI. The inauguration marked FIPPI's active participation in the exhibition and provided an opportunity to showcase the Federation's initiatives, connect with industry stakeholders, and strengthen its engagement with the plywood and panel industry.





The four-day engagement at MATECIA Exhibition 2026 witnessed encouraging footfall at the FIPPI stall, with visitors and industry representatives showing interest in the Federation's activities and initiatives. Throughout the exhibition, Dr. M.P. Singh, Director General, FIPPI along with the FIPPI team, visited various exhibitor stalls, interacted with participating companies, and engaged with industry stakeholders. These interactions provided valuable opportunities to strengthen industry connections, exchange insights, and foster greater collaboration within the plywood and panel sector.









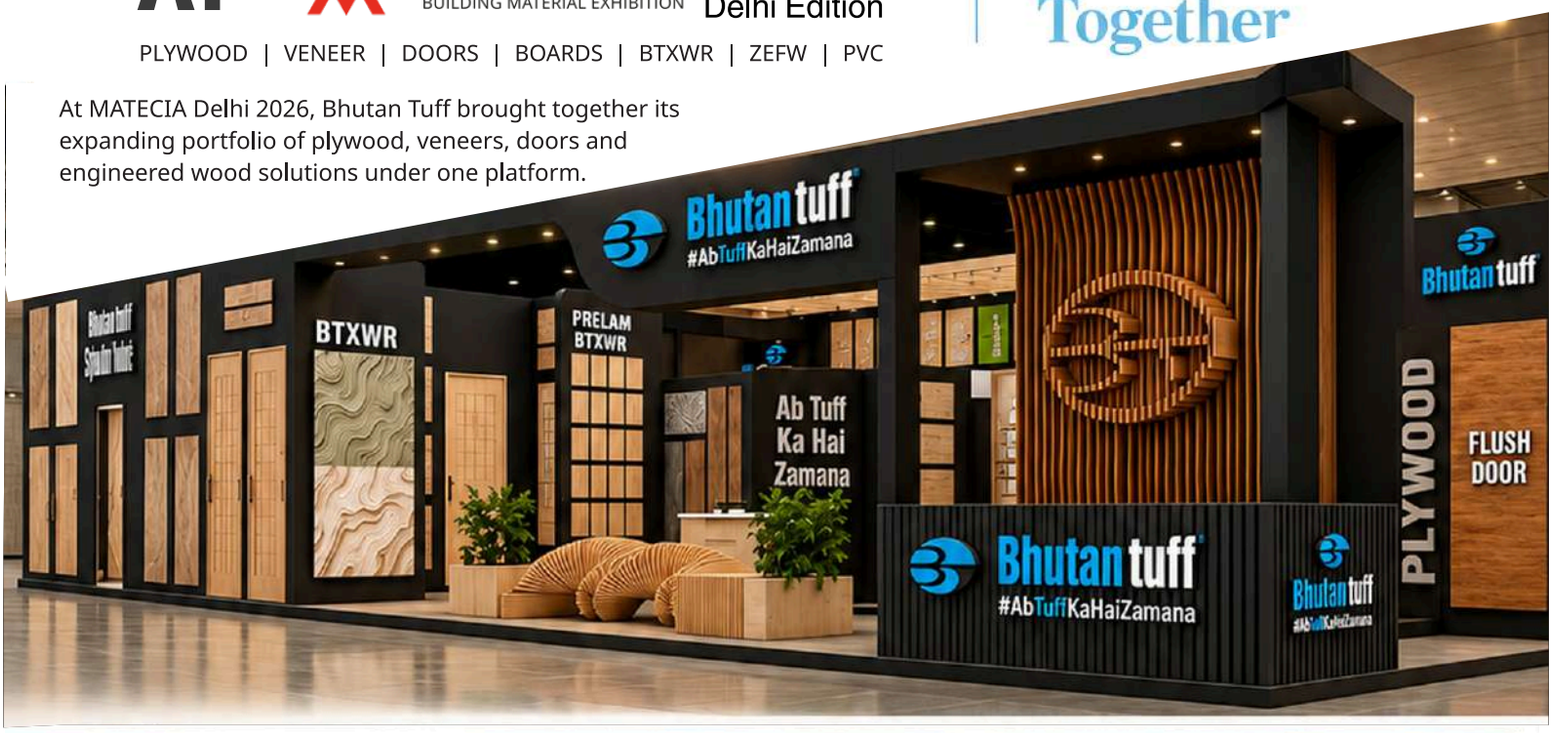
Bhutan tuff

AT MATECIA 2026 BUILDING MATERIAL EXHIBITION Delhi Edition

PLYWOOD | VENEER | DOORS | BOARDS | BTXWR | ZEFW | PVC

Material Innovation, Performance and Design Together

At MATECIA Delhi 2026, Bhutan Tuff brought together its expanding portfolio of plywood, veneers, doors and engineered wood solutions under one platform.



Where Performance Meets Design

The MATECIA Delhi experience brought the Bhutan Tuff team closer to the architecture and interiors community while providing a platform to present its evolving product portfolio, finishes and material applications.The exhibition provided an opportunity for architects, interior designers, dealers and industry professionals to explore the brand's material range, finishes and application possibilities across furniture, interiors and architectural spaces.



Product Highlights



PLYWOOD
Reliable strength for modern construction and interiors.



VENEERS
A wide range of natural and decorative veneers for premium spaces.



PRELAM BTXWR
High-performance prelam boards for design and durability.



ZEFW
Rice husk reimagined. Sustainable. Versatile. 5% GST only.

Highlights from MATECIA Delhi

The Bhutan Tuff stall showcased a combination of performance-driven boards, decorative surfaces and door solutions, including PRELAM BTXWR and ZEFW, alongside the brand's plywood, veneer and door collections.The display focused on how engineered wood materials can combine durability and performance with contemporary design requirements.



About Bhutan Tuff

Bhutan Tuff is a New India-based manufacturer of plywood and engineered wood products serving furniture, interiors and construction applications. Its portfolio includes plywood, blockboard, veneers, WPC, PVC, MDF, flush doors and specialty boards.

What Defines Bhutan Tuff

- BIS-standard manufacturing
- Advanced production infrastructure
- Precision-controlled manufacturing
- Performance-oriented material solutions
- Warranty-backed product offerings

#AbTuffKaHaiZamana

FIPPI at BRICS Business Forum 2026

11th September 2026

FIPPI was represented at the BRICS Business Forum 2026, organised under India's BRICS Chairship, providing an opportunity to witness discussions on international trade, business cooperation, innovation and economic growth.

The event was graced by **Hon'ble Prime Minister Shri Narendra Modi,** alongside **President of the Russia Vladimir Putin, President of Iran Masoud Pezeshkian**, and other distinguished leaders. **Hon'ble External Affairs Minister Dr. S. Jaishankar and Hon'ble Minister of Commerce & Industry Shri Piyush Goyal** were also present.

FIPPI's participation reflected its continued engagement with national and international platforms and its interest in understanding global developments relevant to the Indian plywood and panel industry.











FIPPI Delegation Visits WMF 2026 in Shanghai

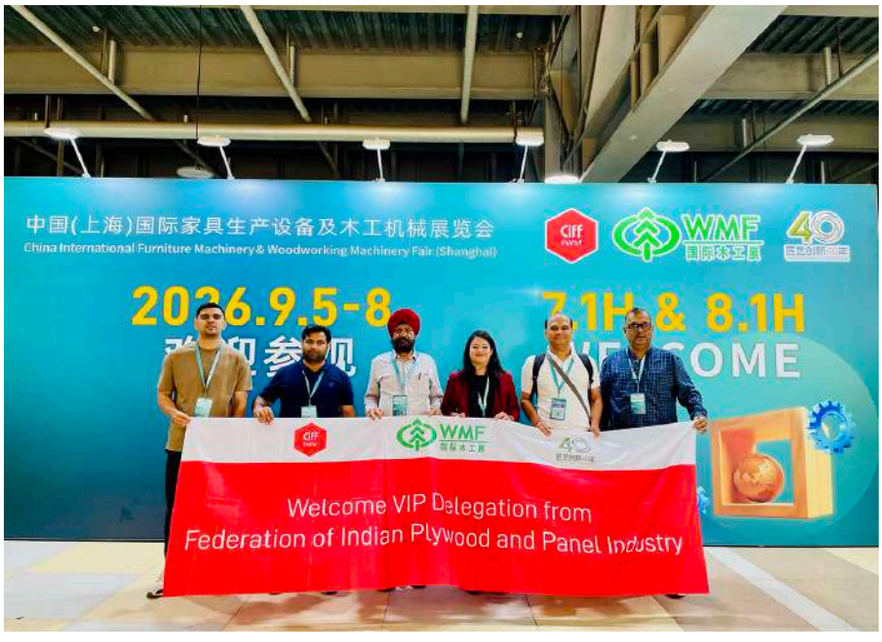
5th - 8th September 2026

A delegation from the **Federation of Indian Plywood & Panel Industry (FIPPI)** participated in the **WMF – Shanghai International Furniture Machinery & Woodworking Machinery Fair 2026,** held from **5–8 September 2026 in Shanghai, China.**

The Delegation included:

- Mr. Inderjit Singh Sohal – Harisar Industrial Corporation
- Mr. Ravindra Chhajer – Ambica Hydraulics Pvt. Ltd.
- Mr. Ayush Gattani – Gattani Plywood
- Mr. Vijay Maheshwari – Duroply Industries Ltd.
- Mr. Sandeep Kumar – Duroply Industries Ltd.
- Dr. Richa Bansal, FIPPI

The visit provided an opportunity for FIPPI and the participating industry representatives to explore the latest technologies, machinery and innovations in the global woodworking and furniture manufacturing sector. The delegation also engaged with international industry stakeholders, exchanged knowledge and explored avenues for strengthening cooperation in the wood-based panel industry.









PRIMARY MEMBERS

Century Plyboard (India) Ltd.

Greenply Industries Ltd.

Balaji Action Buildwell Pvt. Ltd.

Greenpanel Industries Ltd.

Rushil Décor Ltd.

Archidply Industries Ltd.

Greenlam Industries Ltd.

Duroply Industries Ltd.

Austin Plywood Pvt. Ltd.

Merino Industries Ltd.

Oswin Wood Panels Pvt. Ltd.

Mayur Panel Pvt. Ltd.

Gravity Industries Pvt. Ltd.

Sylvan Plyboards (India) Ltd.

The Western India Plywood Ltd.

Realply Industries Pvt. Ltd.

Amazon Wood Pvt. Ltd.

Gattani Industries

Jolly Board Ltd.

Rama Panels Pvt. Ltd.

Everest Ply & Veneers Pvt. Ltd.

United Timber Works

Royale Touche Pvt. Ltd.

R.P. Wood Products Pvt. Ltd.

Shivam Wood Industries

Vritti Impex Pvt. Ltd.

Hunsur Plywood Works Pvt. Ltd.

Gujarat Woodlam Products Pvt. Ltd.

Aggarwal Plywood Industries

A.K. Apple Ply Pvt. Ltd.

Amit Decorative Plywoods Pvt. Ltd.

Amulya Mica Industries Pvt. Ltd.

Tree Lab – Birmi wood products

Burgeon Verticles Pvt. Ltd.

E3 Panels Pvt. Ltd.

Ganesh Plywood Pvt. Ltd.

GMG Plywood Pvt. Ltd.

Golden Plywood Industries

ITP Ltd.

Jacsons Veneers & Panels Pvt. Ltd.

Jagdamba Wood Industries

Lalsons Plyboard Pvt. Ltd.

M & S Ply Industries

Magnus Plywood Pvt. Ltd.

Maheshwari Woods Pvt. Ltd.

Metro Plywood Pvt. Ltd.

New Pragati Plywood Industries

Northern Plywood Products

Oberoi Wood Industries

Palghar Plywood Products Pvt. Ltd.

Pashupati Veneer

Punjab Wood Products

Riangdo Veneers Pvt. Ltd.

Sanwaria Doors and Ply Pvt. Ltd.

Savitri Woods India Pvt. Ltd.

Strandply LLP

Tajpuria Industries Pvt. Ltd.

Vidya Ply and Board Pvt. Ltd.

Vimba Industries Pvt. Ltd.

Virgo Plywood Ltd.

Woodon MDF Panels Pvt. Ltd.

ASSOCIATE MEMBERS

Ambica Hydraulics Pvt. Ltd.

Ambica Engineers & Lubricants Ltd.

ARCL Organics Ltd.

Bharat Cluster Ventures Pvt. Ltd.

Chopal Engineering Pvt. Ltd.

Creatofox Event Pvt. Limited

Richwood Industries Pvt. Ltd.

Windson Chemical Pvt. Ltd.

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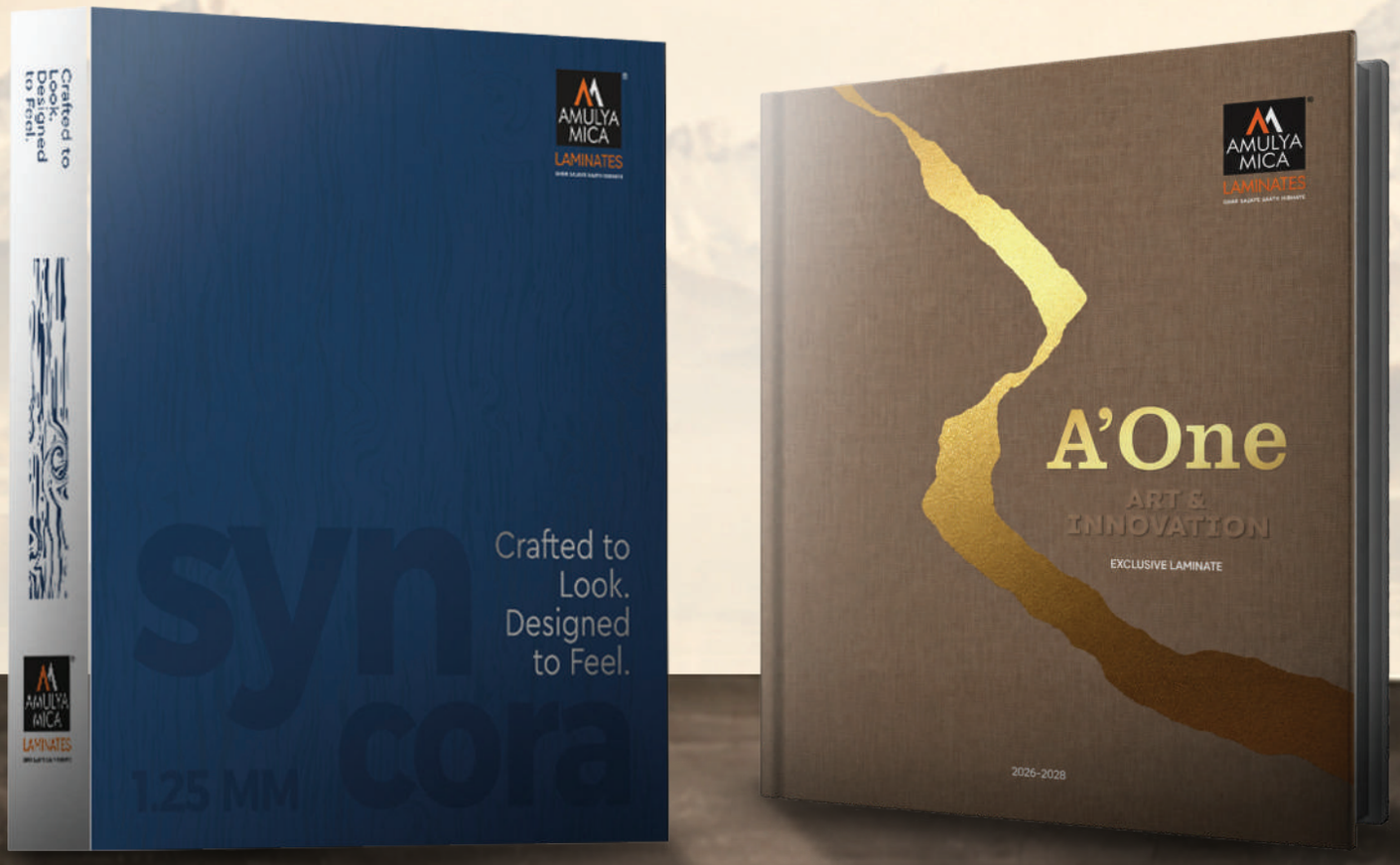

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