

Proceedings of the Workshop held on 11 November 2022

Institute of Wood Science and Technology (IWST), Bangalore organized hybrid mode (online and offline) one day workshop in on the topic “ Integration of wood and wood based products in Green Building” on 11 November 2022 from 10.0AM to 5.30 PM. Mr. Shiva Kumar, IFS, Head Extension Division started the webinar with welcome address. In the inaugural address, Dr. M.P. Singh, IFS, Director IWST appreciated the team for organizing such kind of events and expected that Central Public Works Department (CPWD) can be a pioneer in wood and wood based products engineering construction. Dr. Singh hopefully urge for the support from other eminent personality for making green building in the campus with this small beginning and he again told that the objectives of the workshop is to sensitize everybody that wood and wood based products can be integrated in the green building as a material. Dr. Singh asked to contribute at least 3-4 pages articles for “Integration of Wood and Wood based Products in Green Building” with the special issues for Wood is Good Magazine’ to extend the knowledge at higher level. He also encouraged to Sri. H. Nagraj, CEO, Velanki information system limited, Bengaluru for planning to make first 20 storey green buildings in India i.e., in Bengaluru. Sri. Sanjay Pant, DDG (Bureau of Indian Standards), New Delhi told that it is very traditional and established part about the use of timber in building construction all over the world except some of the desert countries, due to lack of timber in that geographical area. He provided information on standardization of timber that has started in 1947 with the establishment of Indian Standard institution. Sri. Pant told that there are 136 Indian standards on timber and timber stores including bamboo and cane products. He also provided information on various kind of Indian standards related to timber and assured that he is always ready with IS to support the mass timber construction.

Om Prakash Tripathi, ADG, CPWD, Region Bangalore addressed the gathering that construct infrastructure in a way that avoid all the concrete elements and for our country there is huge requirement of wood. Those who own the wood or those who are suppose to conserve the tree/wood, they are also coming forward with the alternative solutions in what manner it can be used. Mr. G. Narayanaswamy, ADG, NACIN, Bangalore told that we need to tell the people about the use of wood, as it consume and reduce CO₂ from the atmosphere as well as it provides good returns. Sri. B.K. Singh, ADG Forest, MoEF&CC, Govt. of India, New Delhi addressed that the timber is the solution of different problems of carbon sequestration and climate change

mitigation. He took the reference of a study that around 38% of carbon emission from the construction/constructed building and structures that's why decarbonization is the big challenge with increasing population. He suggested that use of timber in building construction is only option including window and frame to replace the cement and other concrete materials.

Ar. Bhavana Sharma, Artius Interior Products Gurgoan,

Presentation topic: 'Rethink Wood'

She shared her success story of the development of her wood based company, named RTS. She also shared her experience on how use of wood is successful in making building in various countries including Japan with integrated factors like fire, earthquake, termites attack and maintenance. She again emphasized that use of wood in construction delivered zero wastage, zero dust as an intermediate product and a good alternative materials to replace concrete materials with the increasing population at world level which will be working in climate change mitigation.

Ar. Neelam Manjunath, CEO and Founder, CGBMT School of Simple Living, Bangalore,

Presentation topic: 'Let's build with Bamboo'

In her presentation she gave several examples of multistory building made up of bamboo and described about various uses of bamboo at international level along with development of prototype.

Mr. Kiriti Sahoo, Area Convener, Sustainable buildings (SRC), the energy and research institute, TERI, Bangalore

Presentation topic: 'Wood- A case study in a green building'

He talked about the case study in a green building. In his presentation he focused that we have to optimize the appropriate wood materials to reduce the wastage for the construction. In his lecture he told that it has become necessary to think over, how can we preserve the uses of wood especially wood composite in spite of, solid wood in the construction. Mr. Sahoo suggested that use more wood by planting tree in urban area also, as tree act as cooler, greener, and cleaner and reduce the energy demand in the area.

Sri.H. Nagraj, CEO, Velankani Information System Limited, Bangalore,

Presentation topic: ‘Timber based construction towards net zero’

In his presentation he told that we have domestically made available timber with manufacturing facilities of CLT, GLT is to be done for using this type of construction. Enthusiastically, he told we need to work on new policies, new guidelines and new frameworks so that government become assured towards timber based construction. He again told that can we have next timber based airport and government building in the country.

Mr. George Leuzinger (Architect, ETH Zurich), Timber Structures, Bangalore

Presentation topic: ‘Low tech processing of local plantation species towards quality construction timber’

Mr. George focused on the importance of GLT in construction which is more valuable than solid wood. He told that he is working on conversion of local plantation timber for constructions purposes. He asked that can India put up wood engineering towards university, schools, and training campus construction.

Er.M.M. Dalbehera, Senior Scientist, CSIR-CBRI, Roorkee

Presentation title: ‘Structural performance of bamboo as mainstream green building material’

In his presentation he discussed about the lack of books that shows design of bamboo as a building material and covered overview on bamboo as building materials. Er. Dalbehera described about the facilities for testing of wood and wood based products. He briefly discussed about different species of bamboo used for structural applications and bamboo as a building material and faces the challenge between demand and supply.

Mr.PrakashSuthar,Windsor Housing USA Inc

Presentation title:‘Mass timber for construction of high rise buildings’

In his lecture he covered the advantage of mass timber components, meso-elasticity of wood fibres. Three areas have been covered by him for mass timber construction of high rise buildings i.e. design, values and innovations. To construct multi storey buildings in India three things are

important, they are mass timber components, design values and standards, which are allowed to do in building coding.

Dr. Jimmy Thomas, Assistant Director Technical Services, Canadian Wood.

Presentation title: ‘Sustainable futuristic buildings with mass timber’

In his talk he told that 13th and 16th century construction technology and materials was different and emphasized how concrete materials have been negatively affected to the environment. He covered both advantage and limitations of wood in constructions. He also briefed about engineered wood, Canadian Wood and told that wood is a gift of nature to humanity, as it is renewable, recyclable, environment friendly and have excellent strength to weight ratio

Ar.SandipMukherji,QuercusSpace,Banglore.

Presentation title: ‘Thinking different for the love of our planet’

In his lecture he told that to make furniture the basic understanding of wood is important. Timber is used to make constructions. He briefed that we have to feel the materials if you want to use and a lot of challenges is there while using wood for construction in large scale, as TATA, Reliance and other company have already penetrated the market.

Mr.Ritesh Kumar, Scientist-F,WP Division, IWST, Banglore

Presentation title:Mass timber and multi-storey building construction.

In his presentation he told that steel and concrete requires a lot of energy to produce it than timber and it is sustainable material which locks the carbon from the atmosphere. He told that this institute is answerable about the proper seasoning, preservation, finishing of wood.

At the end of workshop Dr.Rakesh Kumar, Scientist F, IWST proposed the formal vote of thanks.

