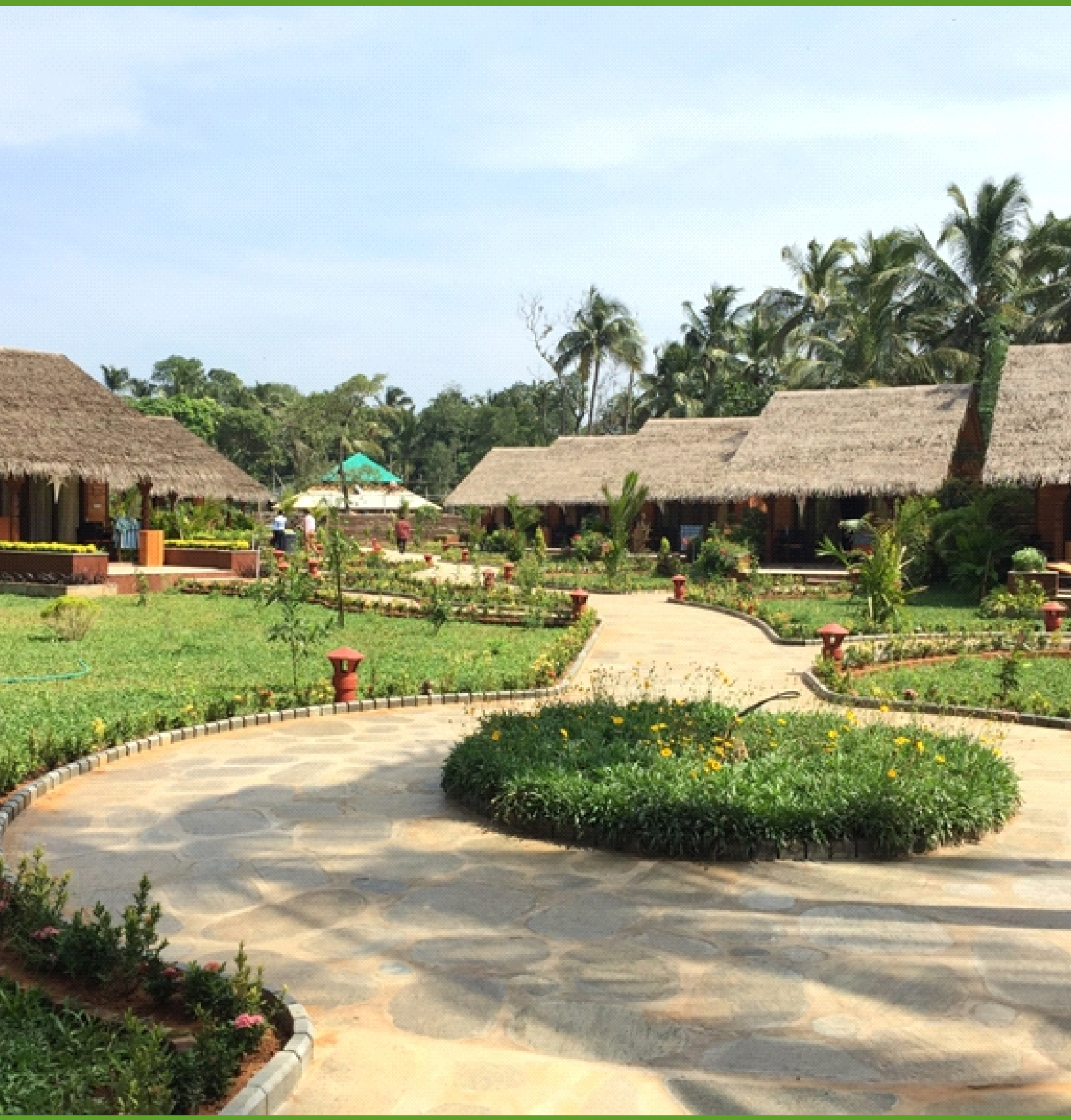
Case Study

Company: M/s Nawoco Ltd., Kerala
Project: Premium Ayurvedic beach resort, Kerala
Architect: Ar. N. Mahesh (Iyer & Mahesh, Kerala)

Canadian Wood
www.canadianwood.in



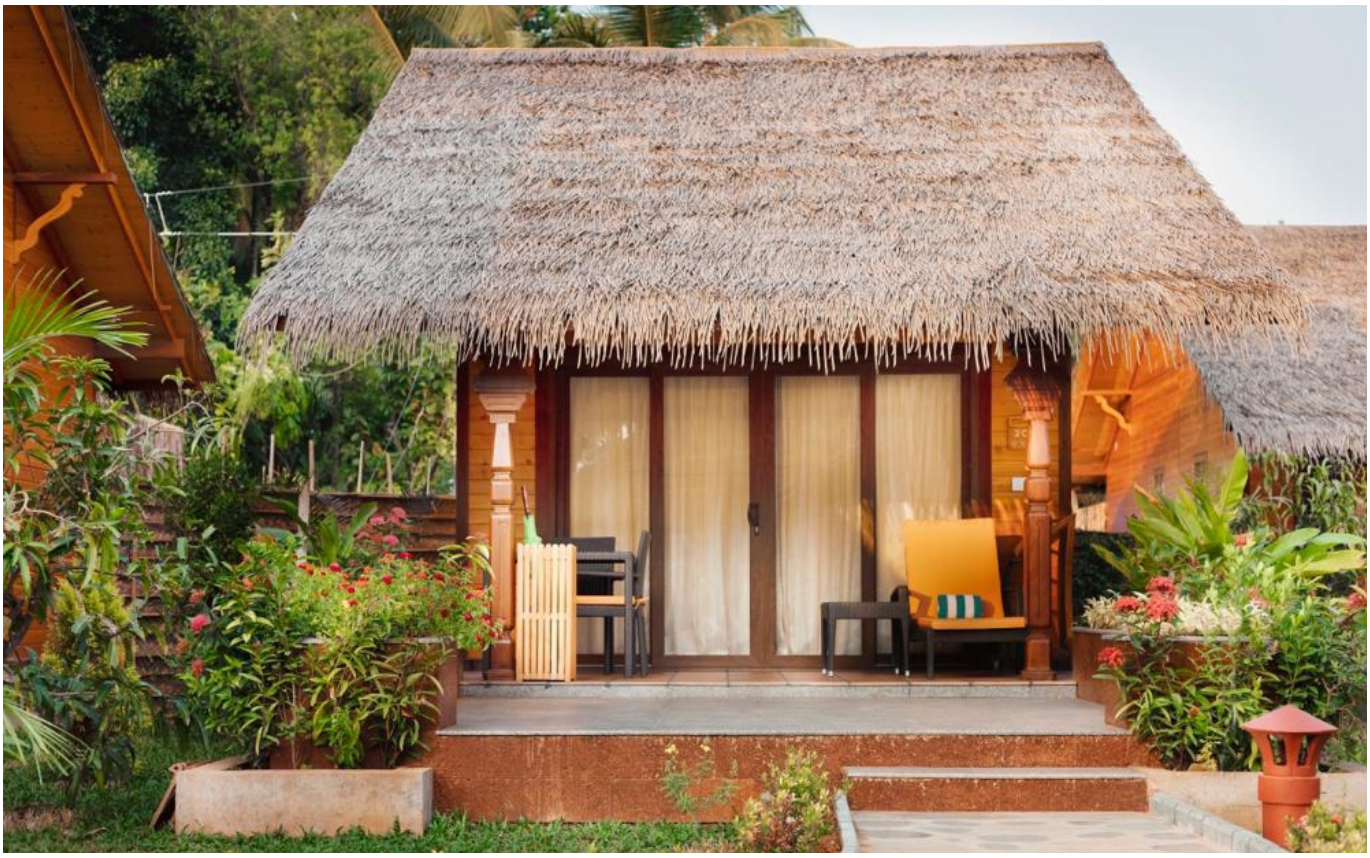
Canadian Wood species:

The fine art of working with wood

Architect's Profile

Located in southern India in Trivandrum, Iyer & Mahesh is amongst the country's leading architecture, interior design and engineering consultancy firms. It is well known for the cutting-edge architecture of eco-friendly resorts, spas and wellness centres. The firm also exhibits exceptional capabilities in the design of large span/multi-storied structures and building technologies involving futuristic features and concepts. Iyer & Mahesh is headed by principal architect N. Mahesh, recognized for his contribution to the field of sustainable architecture and reviving timber construction in a modern concept. He is also credited with designing some of the best resorts and hotels in the country and abroad. A recipient of several national and international awards, he is an industry stalwart and academic with a far-reaching influence on the woodworking industry within the country.

With decades of experience, Iyer & Mahesh is amongst the best and most sought-after designers in the premium hospitality category.



Challenge

The client was a premium Ayurvedic beach resort offering 'Panchakarma -- a holistic healing experience involving cleansing the body of toxins'. The resort is the subsidiary of a well known pharmaceutical company founded in 1921 by His Highness Rama Varma XV.

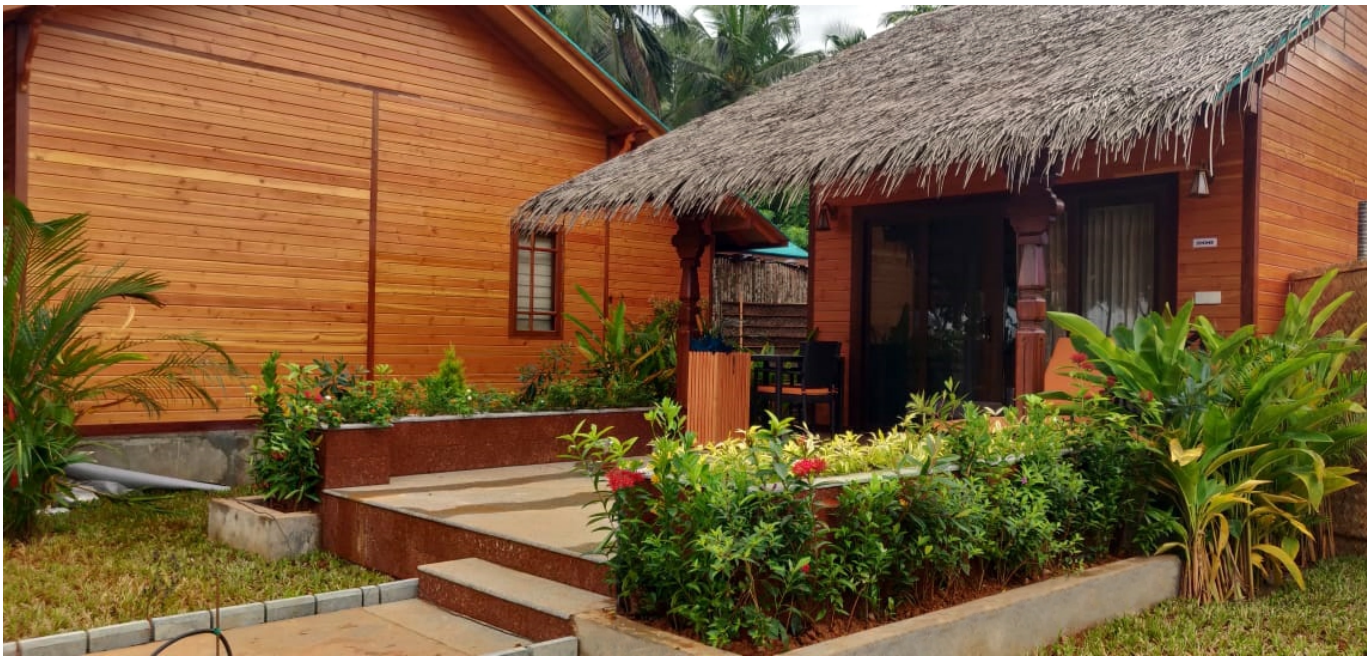
Situated on the shores of the Arabian Sea in Kerala, the resort was positioned to cater to luxury travellers from across the world seeking unique experiences. It was therefore imperative that the space reflect the brand legacy and the authenticity of the services being offered.

The decision was made to create the structures in traditional Kerala carpentry style. This method of building usually relies on the incorporation of local hardwood species like Teak to achieve the required appeal and durability. While the client and architect were inclined to use wood sourced from sustainably managed forests, there were queries regarding the possibility of successful outcomes with British Columbia (B.C.) wood species.

Opportunity

Given the history of building with wood in India, local species are key considerations for indigenous building styles reflective of cultural nuances. Architect N. Mahesh has designed several respectable projects in the hospitality sector that celebrate regional architecture involving wood use for structural purposes.

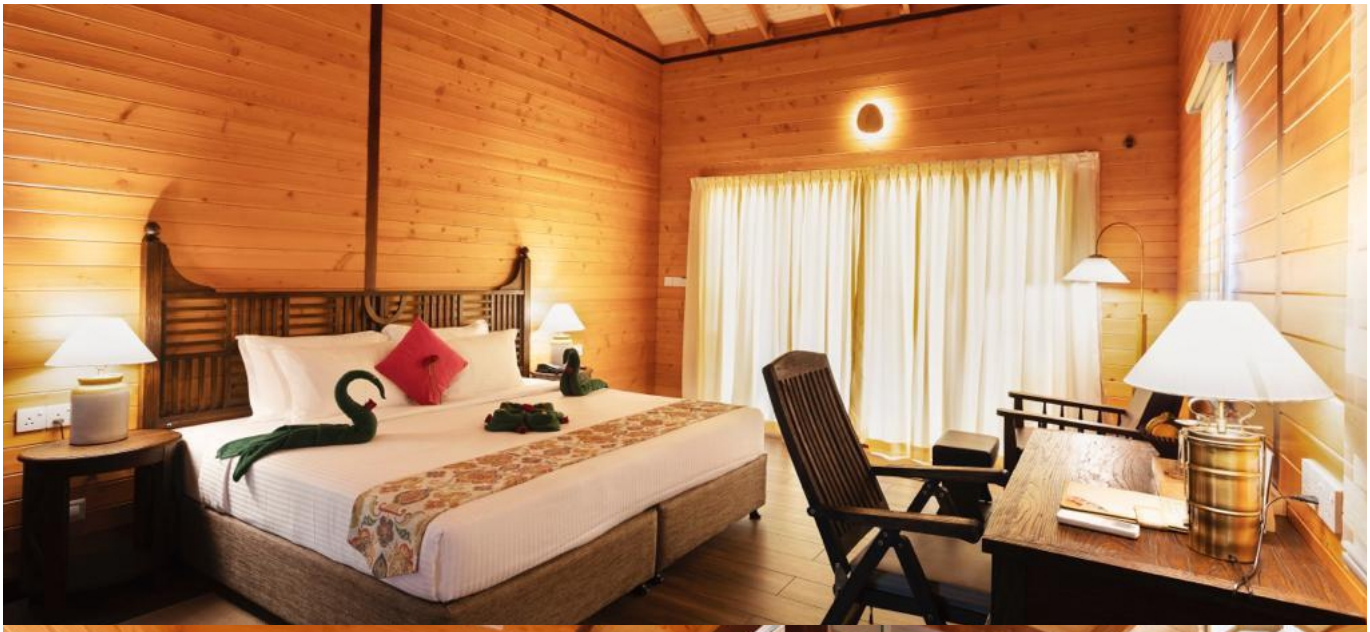
The project was a rare opportunity to incorporate sustainably sourced Canadian wood species in traditional Indian architecture that largely relies on hardwood species.



Product Trial

Key decision makers on the project including the client, the architect and the contractor were offered first-hand experience with B.C. wood species in Vancouver through a trip organized by FII India. It was then decided to use Douglas-fir as the major wood species in this project .

- M/s Nawoco Ltd. based in Kochi: this was the contractor's first time using Douglas-fir.
- Nine cottages of 460 square feet each and a main reception area of 1,200 square feet were built using Canadian wood.
- 2,800 cubic feet of Douglas-fir was purchased from a local stockist based in western India.
- Wood frame construction (WFC) style methodology was used to build the cottages.
- Each cottage included a deck, a covered patio, a large guest room and a bathroom with an open shower surrounded by a small garden.
- Stud wall framing was prefabricated in the factory, transported as wall panels and installed. Douglas-fir cladding and paneling was applied directly on the frame at site. 18mm thick cladding and 12mm thick paneling with tongue and groove (T&G) profiles were created for the exterior and interior of the cottage respectively. The wall cavity was filled with rockwool with a double side aluminum coating for higher thermal efficiency.



Key Outcomes

- The successful execution, high showcase and talk value of the premium hospitality project laid the groundwork for future adoption of Canadian wood species by projecting it as a reliable alternative for structural applications in India.
- Architect N. Mahesh's incorporation of Douglas-fir not only helped demonstrate the suitability of Canadian wood for structural purposes, but also its ability to deliver an authentic appeal in regional architecture.
- Douglas-fir can match Teak in terms of strength and beauty and is proven suitable for a structural format that typically involves use of local hardwoods. These hardwood species have become difficult to source and comparatively expensive. This further creates a preference for Douglas-fir and other fine grained structurally rated Canadian softwood species.

Why Use Canadian Wood?

Sustainable, Green Building Material
British Columbia, Canada is a world leader in sustainable forest management. The rigor of B.C.'s forest management laws is demonstrated by third-party forest certifications (PEFC/FSC).

Long-Term Performance
Wood's versatility, character and individuality are unmatched. When it is properly maintained, wood can be reused, repurposed, and reapplied to other projects. Canadian wood species produce stable lumber with consistently straight grain. The wood is easy to work, finish and glue.

Easy to Manufacture
With low to moderate density values, species like western hemlock, Douglas-fir, yellow cedar, western red cedar and Spruce-Pine-Fir (S-P-F) are all easy to face-laminate, edge-glue, and/or finger-joint.

Quality Assurance
Canadian wood species from B.C. are separated into a wide variety of grades and each grade is intended for a specific end use. Factory grades are intended for ripping or cross cutting to recover the wood's clear fibre; the clear grades help produce knot-free products in a length range of 8-20 feet. This variety of grades allows buyers to choose a quality that suits both their needs and their price considerations.

Multipurpose Applications
Because of their low tangential to radial shrinkage (T/R) ratio, softwoods typically have better stability than hardwoods. Softwoods are well suited to many applications across outdoor, interior and structural uses.

If you're interested in incorporating Canadian wood species into your product line, the 'Try Canadian Wood' initiative is an ideal way to use, experiment and understand wood's numerous advantages.

For free technical/procurement assistance write to FII India at info@canadianwood.in or call+91 2249221600.

For design inspiration and decor ideas using wood, follow us on

Canada

Updated November 2021

Western hemlock | Douglas-fir | Yellow cedar | Western red cedar | Spruce-Pine-Fir (S-P-F)

FII India has made every attempt to ensure the accuracy and reliability of the information provided with input from each trial partner.

www.canadianwood.in