



Frequently Asked Questions



What is Mass Timber ?

Mass timber refers to a type of engineered wood product used for building construction, characterized by its large size, strength, and durability. It is made by layering and pressing wood fibres or laminations together to form solid panels or beams, often used as load-bearing elements in buildings. Examples of mass timber products include:- Glulam (glued laminated timber) CLT (cross-laminated timber), Nail-laminated timber (NLT) etc.



Glulam Timber



Cross Laminated Timber



Nail Laminated Timber



What is the source of the raw material ?

The raw material is sourced from sustainably managed forests in countries like Canada, USA, Russia, Sweden, Germany etc, where scientific principles and extensive replanting ensure the conservation of forest cover.



TOTAL AREA OF B.C.
95 MILLION HECTARES

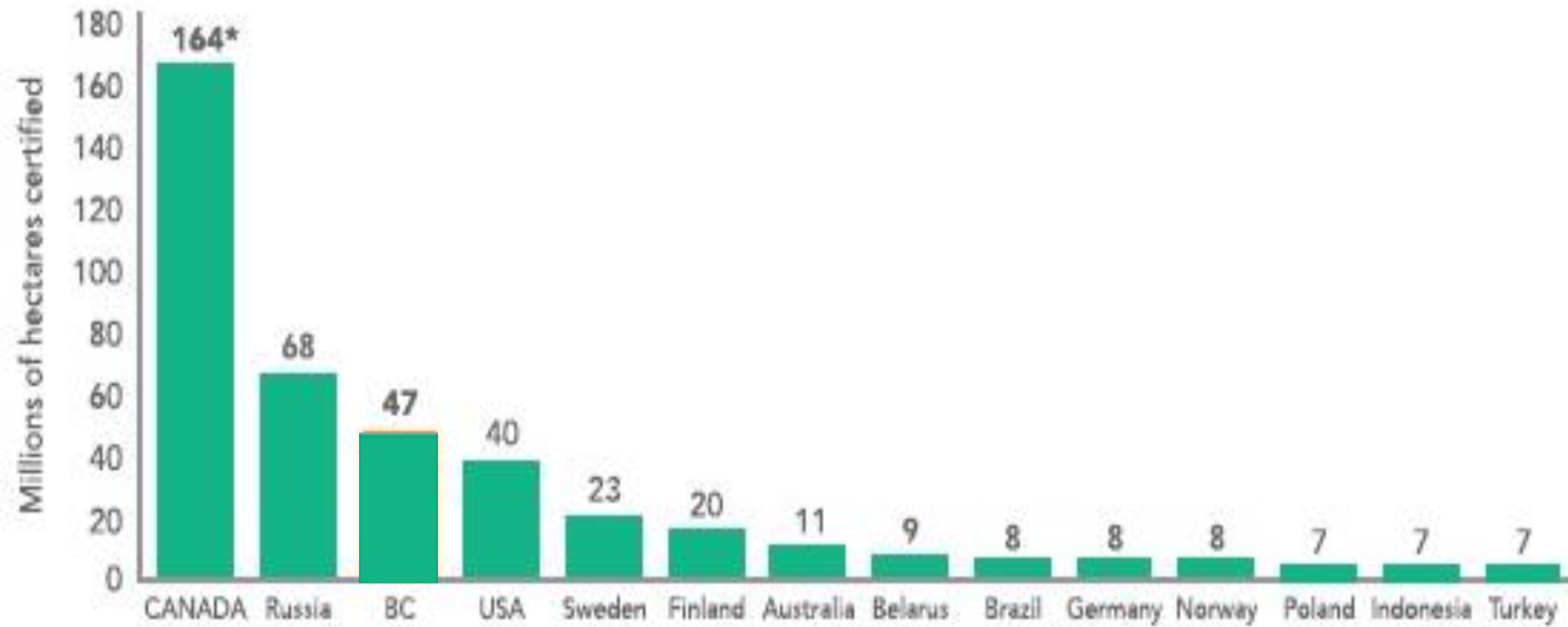
FORESTED LAND BASE
60% OF TOTAL

**LAND AVAILABLE FOR
TIMBER HARVESTING**
21% OF TOTAL

ANNUAL AREA HARVESTED
0.35% OF TOTAL

Source : Canadian Wood Council

Global status of certified forests

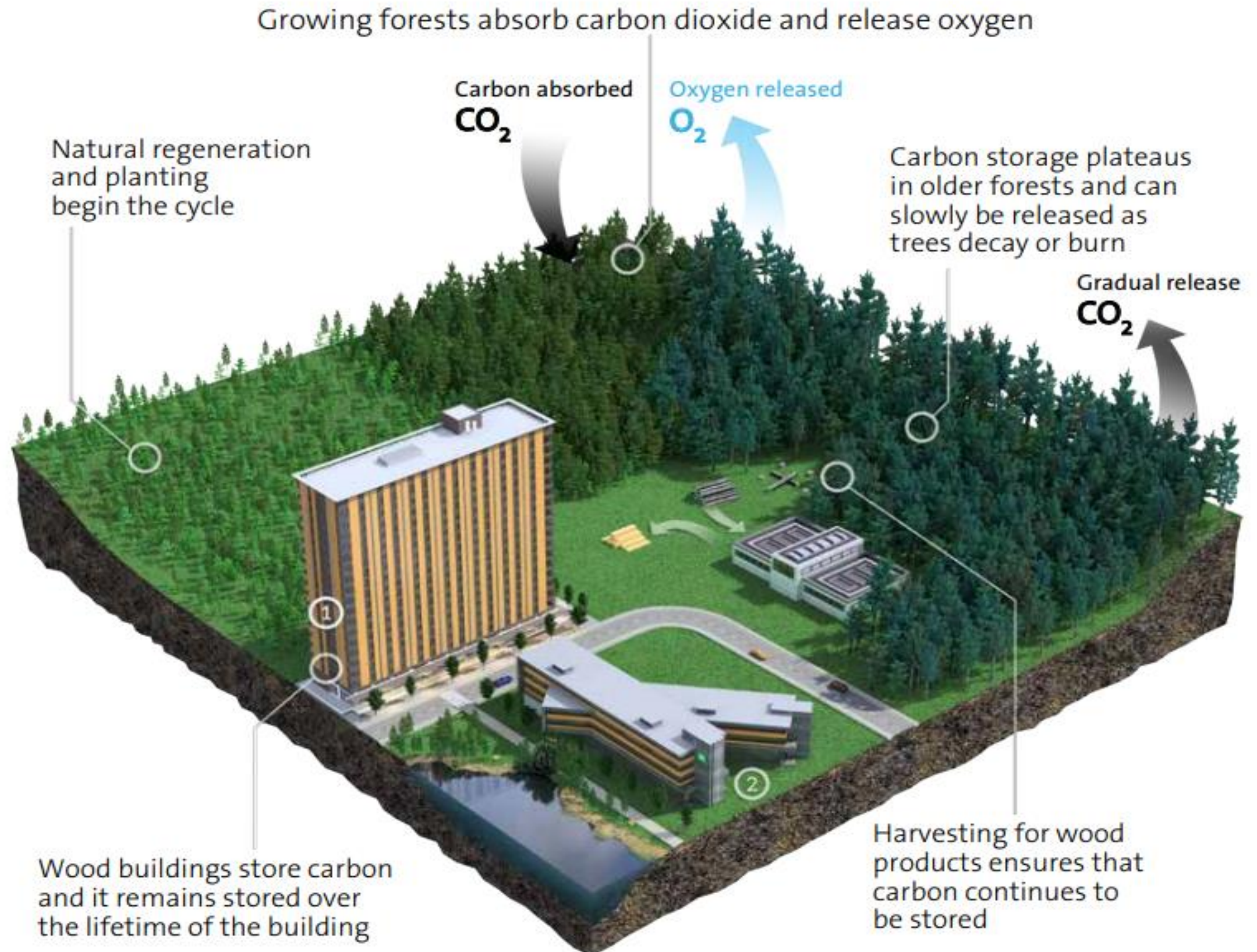


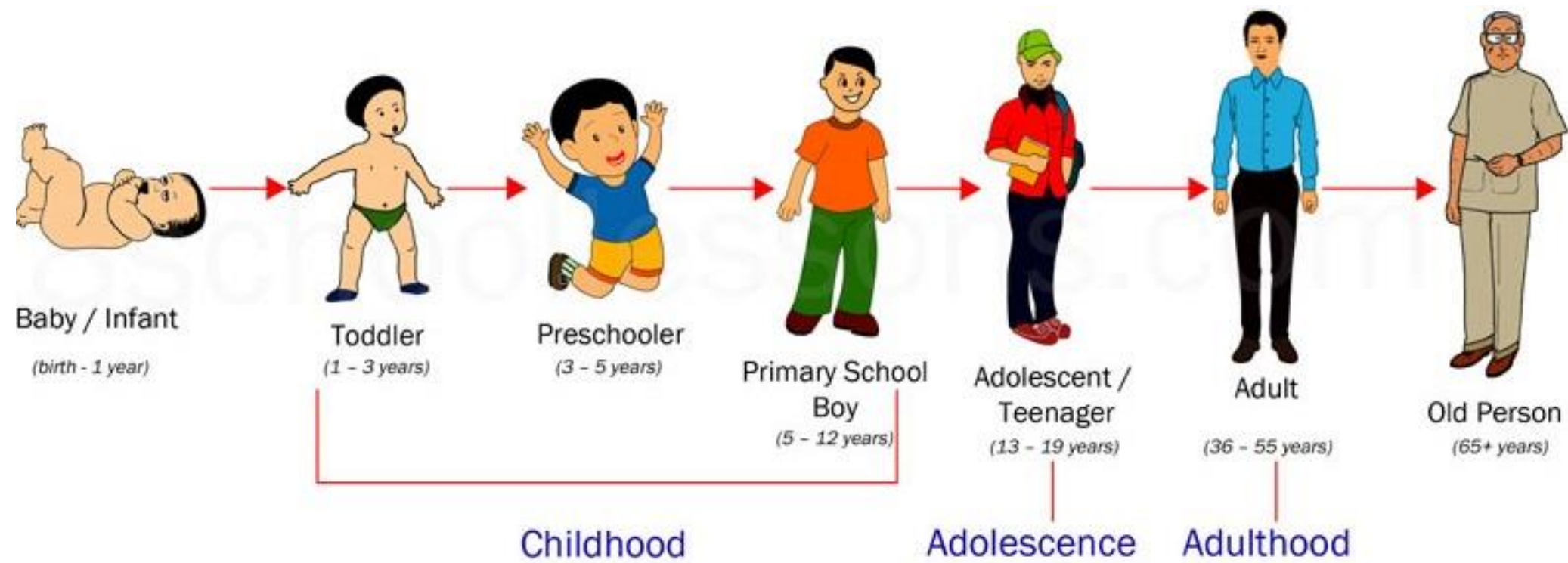
Source : Canadian Wood Council



What is Sustainable Forest Management?

We harvest trees, but also plant new ones to replace them. We protect the forest from harm and keep it healthy, ensuring it remains a home for wildlife and a resource for future generations. This balance allows us to use forests for our needs while preserving their natural beauty and function.





- As trees mature, they lose their ability to remain upright on land and to absorb carbon from the atmosphere.
- When trees decay due to felling or forest fires, carbon is released back into the atmosphere, contributing to its carbon footprint.



How can we identify timber obtained from sustainably managed forests ?

Certification agencies ensure the sustainability of timber. The most recognized agencies are the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). When trees are felled from sustainably managed forests, they are crosschecked by agency officials and labelled. The timber is then tracked through its custody chain to prevent tampering with information from the source to its final destination.



What is the impact of cutting trees on the environment?



Sustainable harvesting selectively logs mature trees, preserving forest cover and carbon storage, while promoting regeneration and balanced growth through replanting. This approach minimizes environmental impact and ensures a sustained timber supply.

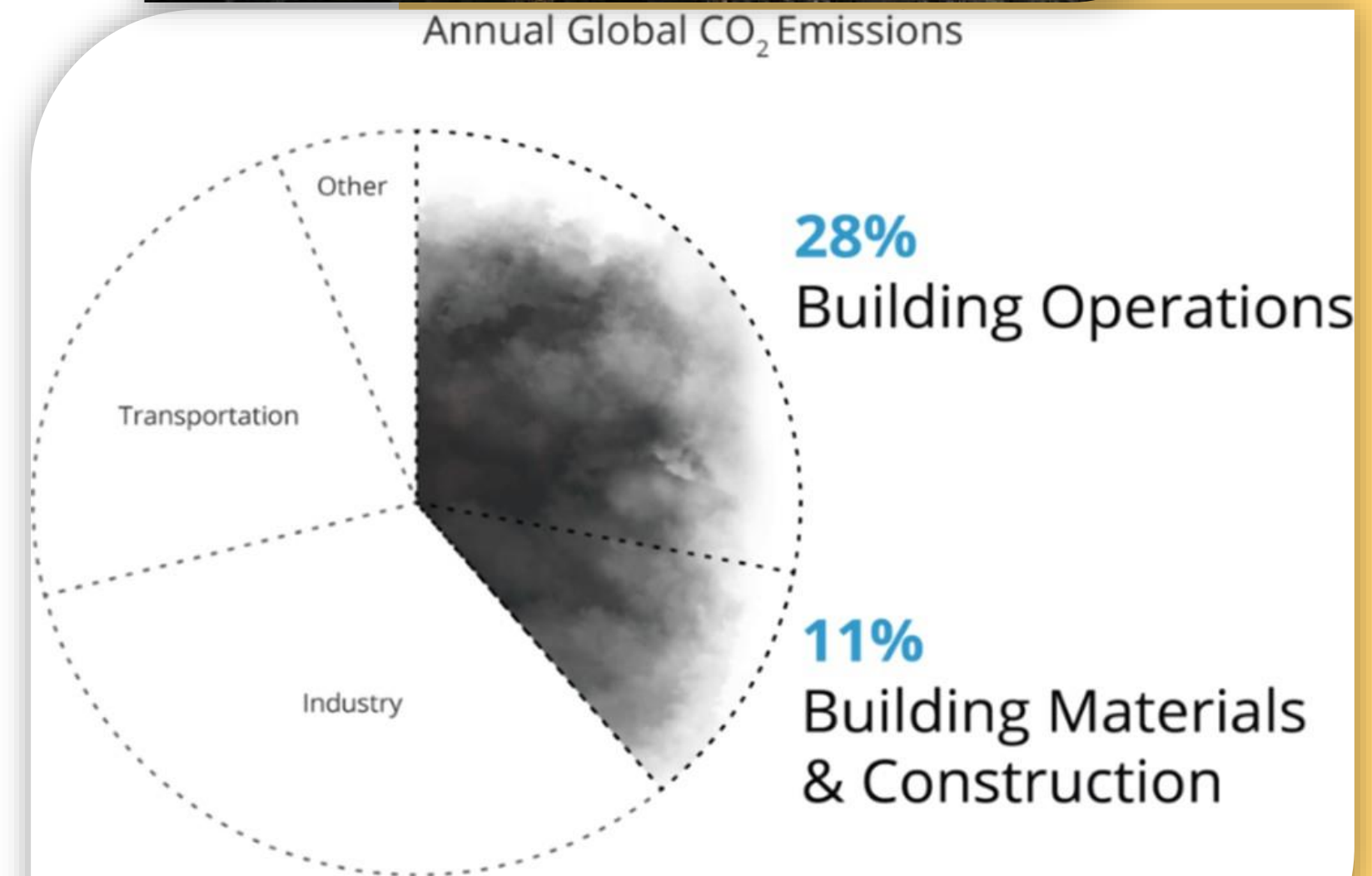


Q. Why don't we stop using wood to save the environment?

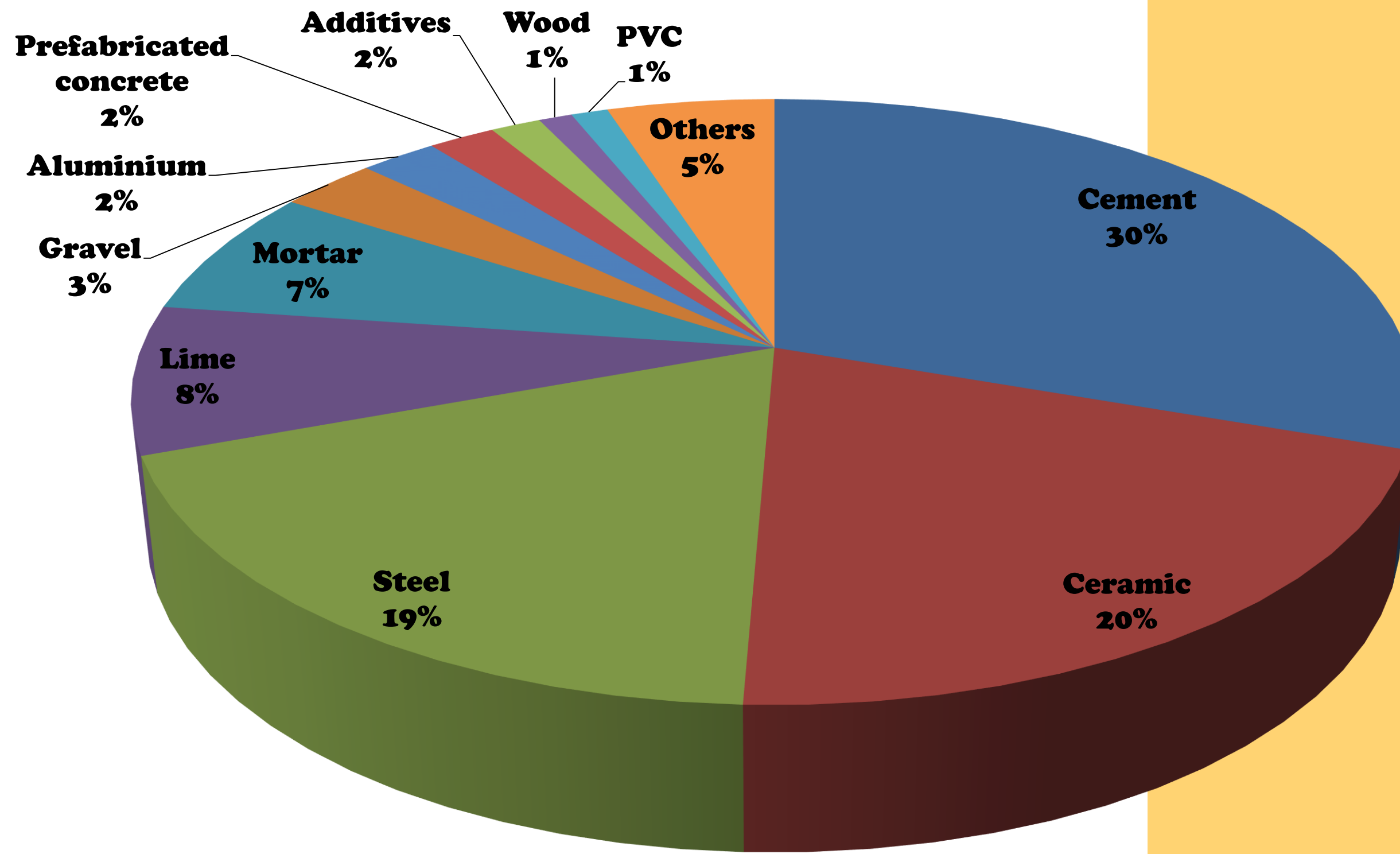
Effective forest management and harvesting are vital, as trees' carbon storing capabilities decline over time, and improper management can lead to carbon emissions. In contrast, traditional building materials like steel and concrete have significant environmental drawbacks, including high energy consumption and excessive resource extraction. In contrast, sustainable wood use offers an environmentally friendly alternative, supporting conservation efforts and reducing environmental degradation.



Annual Global CO₂ Emissions



Carbon Emissions Percentage of Building Materials



Is wood safe from fire ? How can we construct fire resistant structures from timber ?

No material is fully fireproof, and all can burn with enough exposure. While wood is flammable material but, it is possible to construct fire resistant structures from timber to save human lives.

To create fire-resistant structures, several techniques can be employed, including:-

1. Treating wood materials with fire retardant chemicals.
2. Using fire-resistant wood species or engineered wood products.
3. Implementing advanced framing techniques and materials.
4. Installing fire-stopping systems and barriers.
5. Applying intumescent coatings or sprays.
6. Incorporating fire-resistant materials, such as gypsum or cement panels.
7. Designing with passive fire protection principles.



Insulating material



Sprinkler system



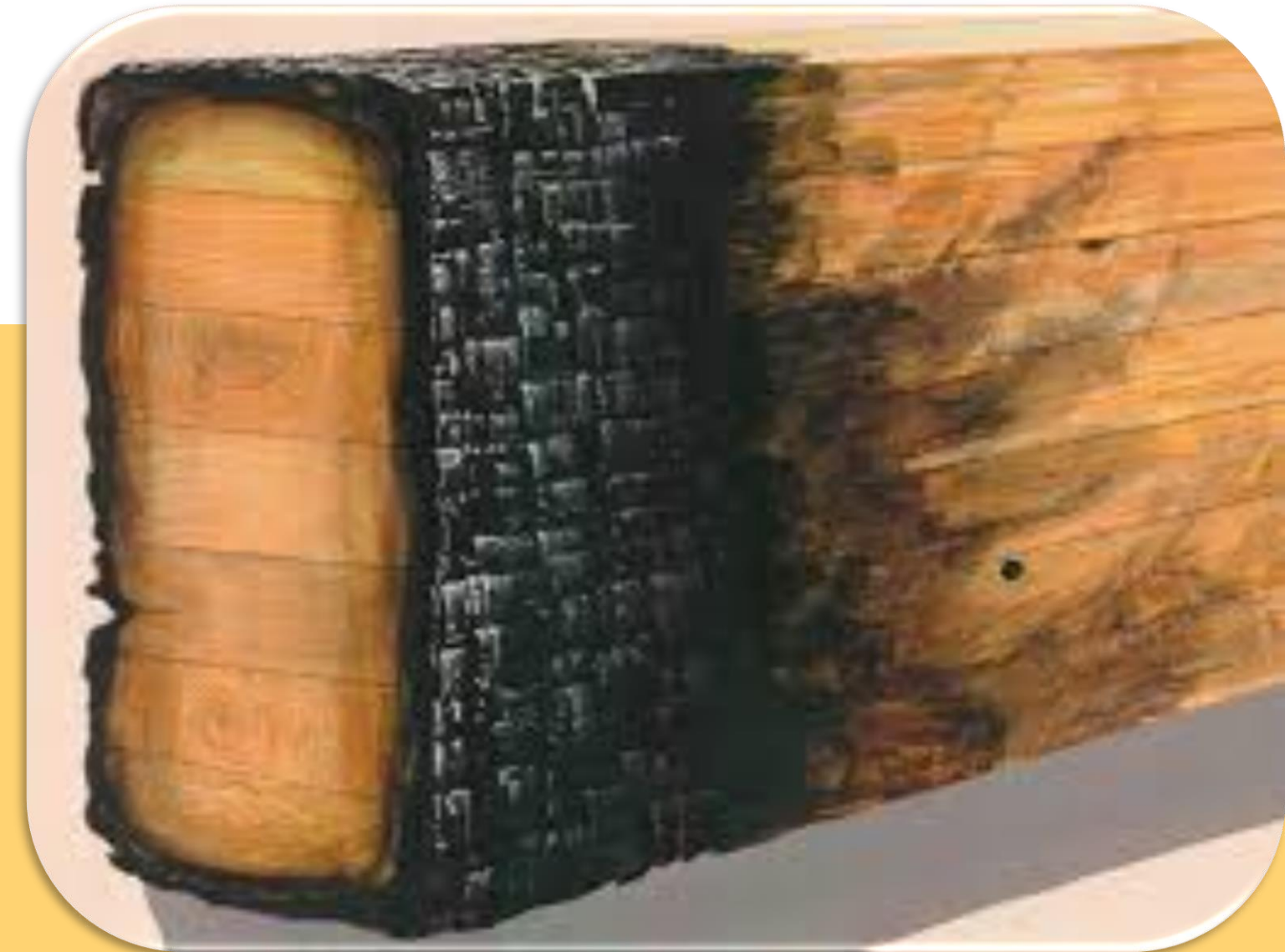
Fire retardant impregnation



Coating

How does mass timber behave in fire conditions?

The increased volume of mass timber provides inherent fire safety benefits. When exposed to fire, mass timber forms a protective char layer on its surface, which limits oxygen supply and slows the burning process. This phenomenon, known as “Char forming,” provides a critical window of time for occupants to evacuate the building, increasing the chances of safe escape and saving human lives.





Fire testing of a steel structure in China

Fire testing of mass timber building by Canadian Wood Council in Ottawa

Fireproof buildings do not exist

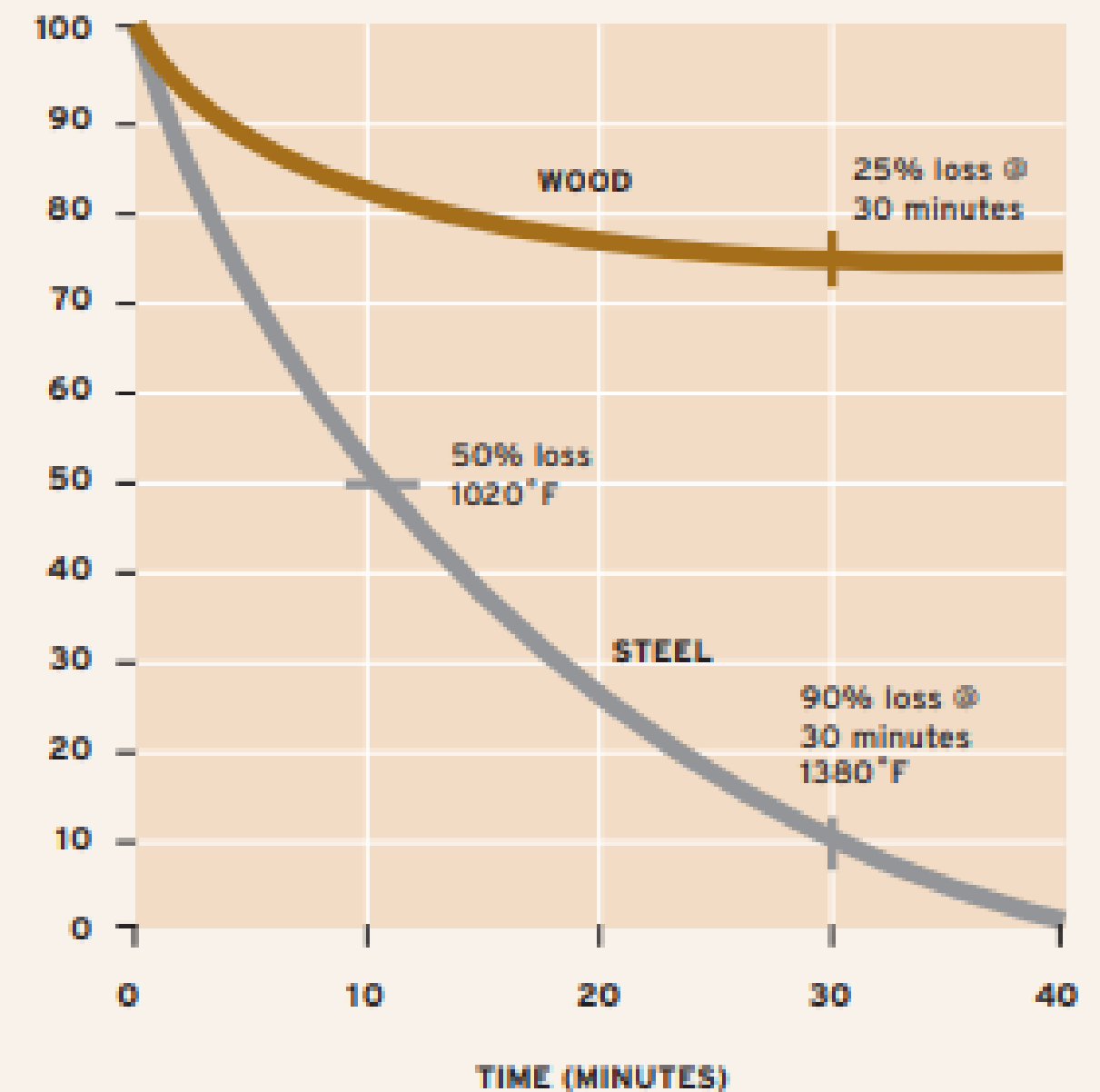


Aftermath of the fire at Turbotech, Inc. in Vancouver, WA. Glulam remained standing while the rest of the so-called “fireproof” building collapsed.



Steel beams have melted and collapsed over charred timber beam which, despite heavy damage, remains in place.

COMPARATIVE STRENGTH LOSS OF WOOD VERSUS STEEL



Results from test sponsored by National Forest Products Association at the Southwest Research Institute

Wood Vs Steel in fire



Are timber structures earthquake resilient ?

Timber is a fibrous material with a superior strength to weight ratio, making it an ideal material for earthquake prone areas. Its light weight combined with good strength allows timber structures to withstand seismic movements more effectively, helping to save lives during earthquakes. This is because wood cells are long, thin, and strong, giving wood its strength and ability to withstand heavy loads, especially when forces are applied parallel to the grain.

What is the status of forests in India, and can we use Indian wood species ?

India's natural forests are protected by conservation laws, and commercial logging (green felling) is not permitted. However, farmers cultivate plantations of species like Melia, Gamhar, Eucalyptus, and others on their land for economic gain. These plantations provide a source of income for farmers, and the timber from these species can be harvested and utilized



How timber is cost effective than other construction materials ?

Timber construction offers several cost advantages.

- ✓ Lighter foundations reduce material cost (steel, concrete etc) and transportation costs.
- ✓ Prefabrication cuts on-site costs.
- ✓ Building with timber speeds up construction, reducing project costs. Timber structures can be completed in just 90 days, compared to conventional materials which can take up to 12 months. It requires less supervision and manpower as well, which is a economical benefit as well.
- ✓ Wood constructed buildings is highly aesthetically beauty so, additional interior work is not required.
- ✓ Government incentives for sustainable building practices
- ✓ Low maintenance and repair costs.
- ✓ Biophilic / health benefits for occupants since wood is natural bio-material.
- ✓ Material efficiency reduces waste and disposal which saves the environment.





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