



Build With Wood

筑木而居

Build to Be Adaptable to Climate Change

气候适应性建筑

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植树造林 和木材的 低碳性



HOW DO WE MEET THE WORLD'S GROWING DEMAND FOR RESOURCES? 我们如何满足全球对资源日益增长的需求



WE GROW THEM

植树造林



WE GROW THEM

植树造林



森林做为全球第二大碳汇，为缓解全球变暖起到至关重要的作用。

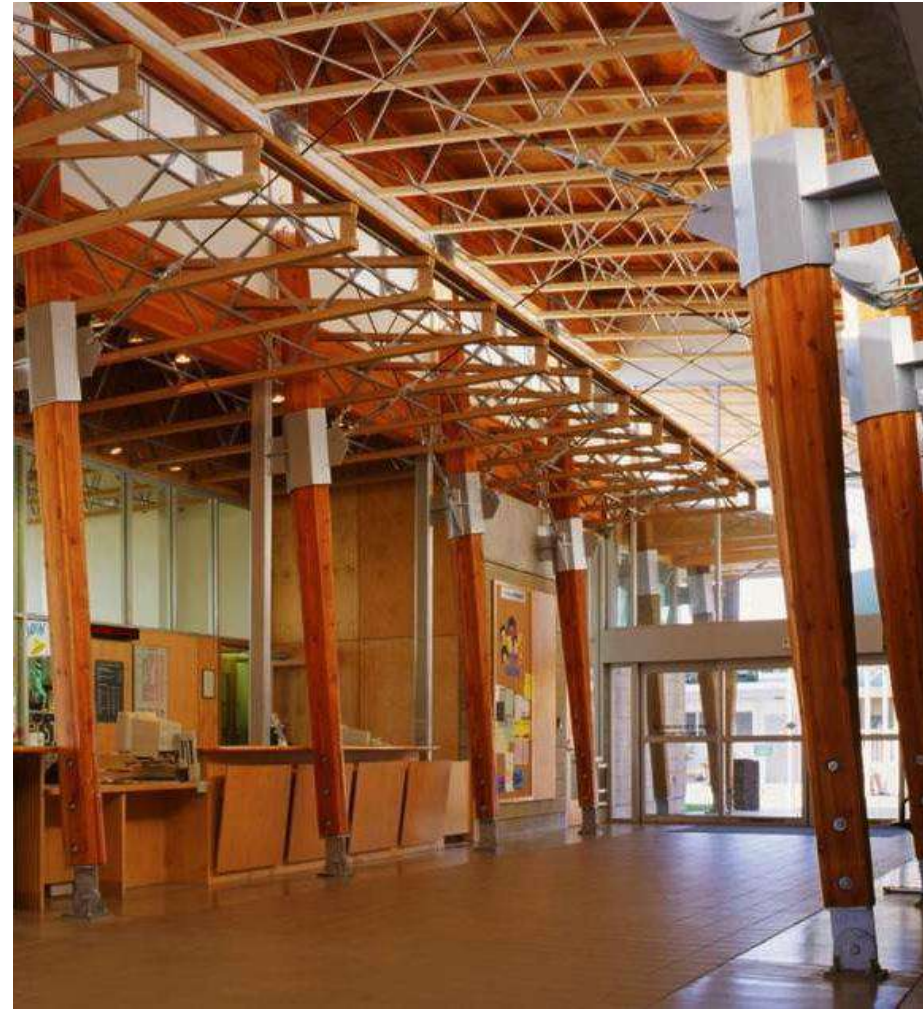
FOREST PRODUCTS = CLIMATE CHANGE MITIGATION

林产品=减缓气候变迁

Maintaining sustainable, productive forests for the purpose of providing substitutes for non-wood fuels and materials creates a **continually increasing GHG benefit.**

保持可持续的、多产的森林，用木材替代非木材燃料，可以持续地减少温室气体排放。

Intergovernmental Panel on Climate Change, Climate Change 2007: Mitigation of Climate Change, Contribution of Working Group III to the Fourth Assessment Report, 2007.



MORE DEMAND FOR WOOD MEANS MORE FORESTS

林业资源需求日益旺盛

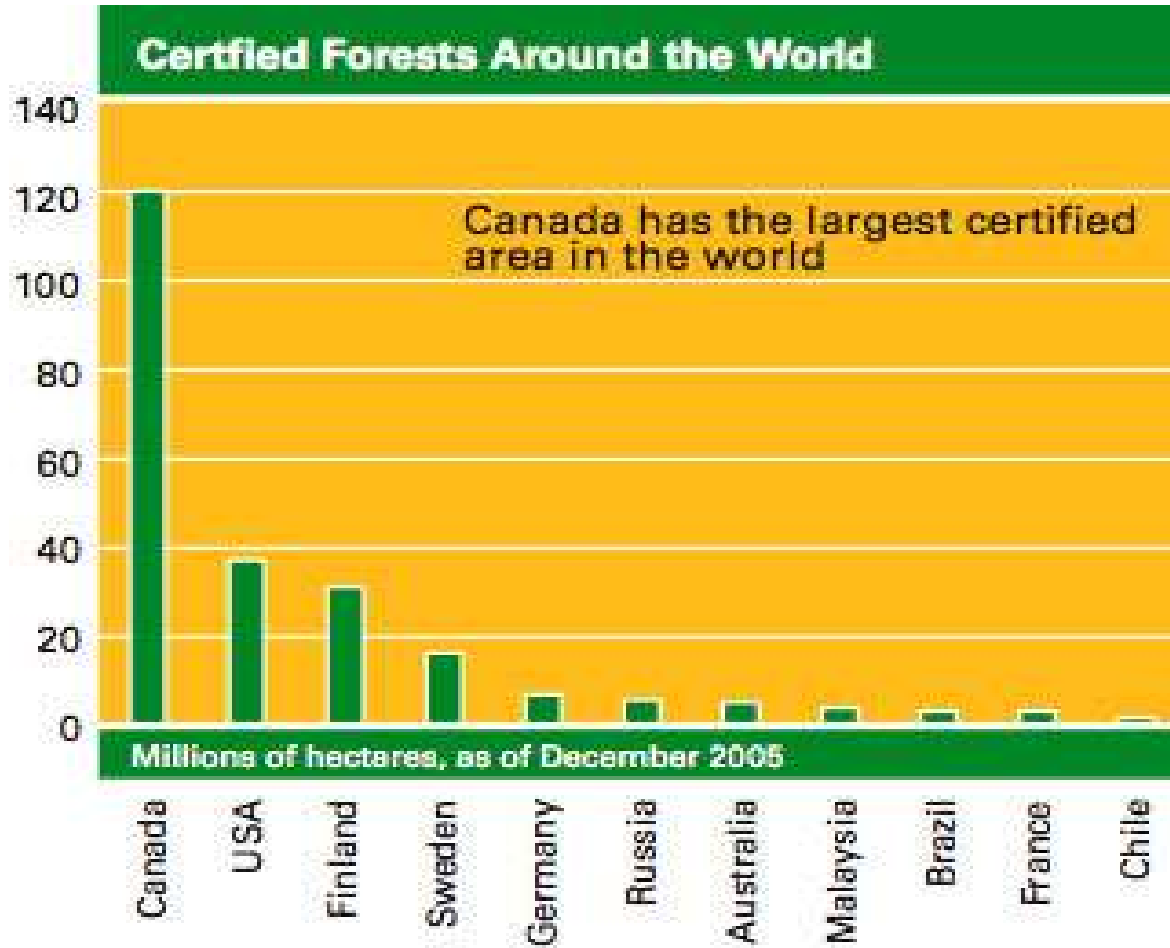
Tropical deforestation is a leading global cause of CO₂ emissions

热带森林砍伐导致全球二氧化碳排放增多



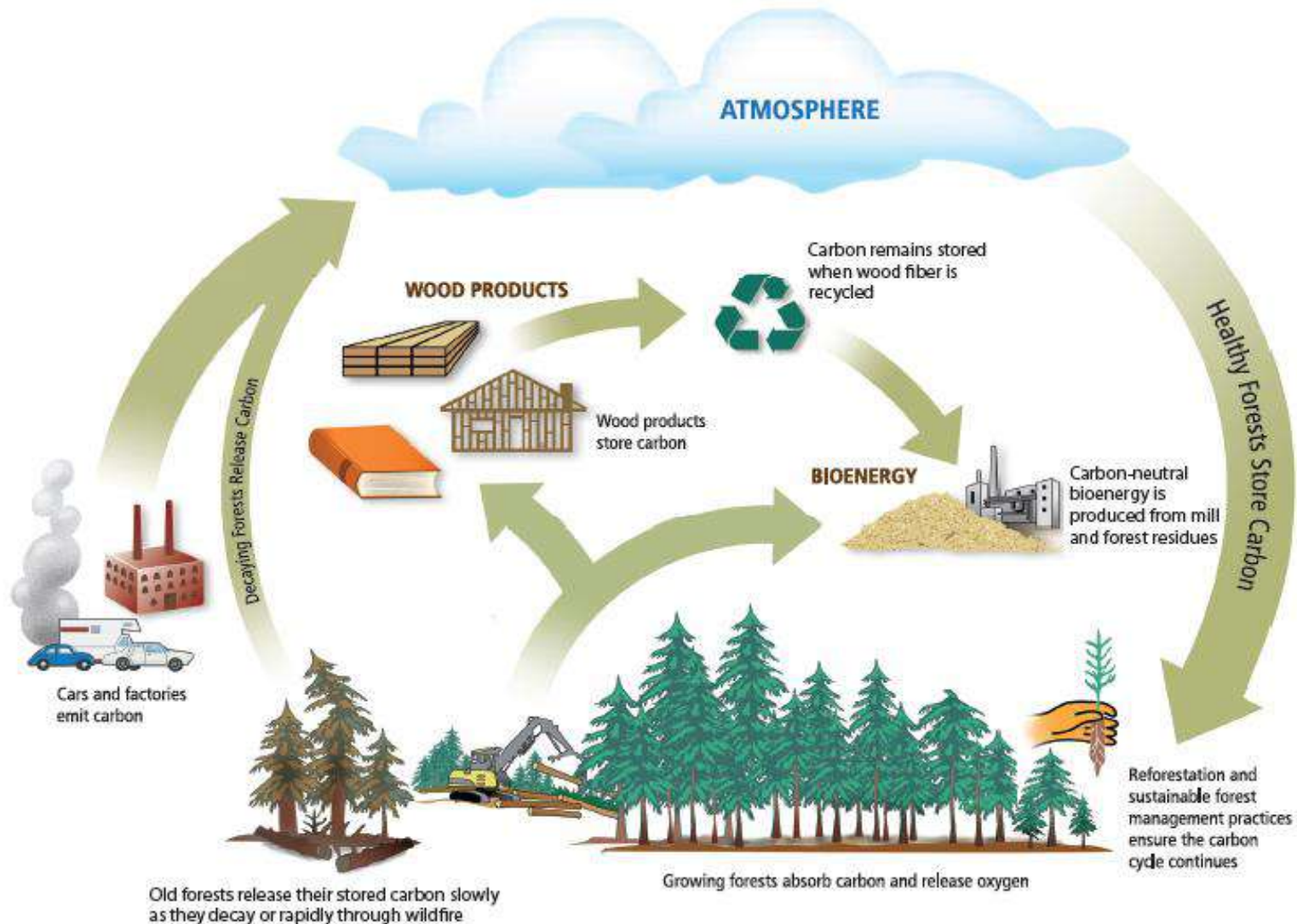
CANADA IS A GLOBAL LEADER IN FOREST STEWARDSHIP

加拿大森林认证全球领先



加拿大的认证森林面积在世界遥遥领先

Sustainable Forestry Carbon Cycle



Adapted from California Forest Products Association materials

WOOD IS CARBON STORED INDEFINITELY

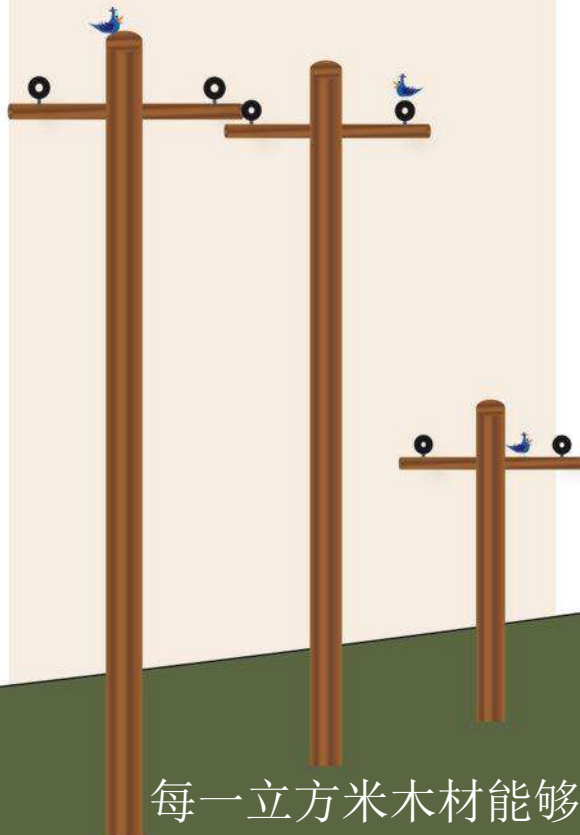
木材对碳的永久性吸收

One metric ton
of wood



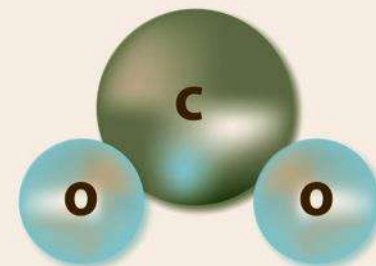
=

2.5
telephone poles



=

1.9 metric tons
CO₂e



每一立方米木材能够存储约1.9吨的二氧化碳

2 现代木结构建筑案例



BUILDING GREEN WITH WOOD

木结构绿色建筑



Mianyang School for the Disabled

四川 绵阳残疾人学校

Mianyang, Sichuan

BUILDING GREEN WITH WOOD

木结构绿色建筑



New Wood Frame School

都江堰新建木结构学校

Dujiangyan, China

BUILDING GREEN WITH WOOD

木结构绿色建筑- 传统人文精神现代工艺打造



Traditional Style, modern technology

徽派风格，北美木结构技术打造的扬州豪地坊别墅

yangzhou, China

BUILDING GREEN WITH WOOD

木结构绿色建筑- 传统人文精神现代工艺打造



Japanese Style, modern technology

日式风格，北美木结构技术打造的金桥百花园

Shanghai, China

BUILDING GREEN WITH WOOD

木结构绿色建筑



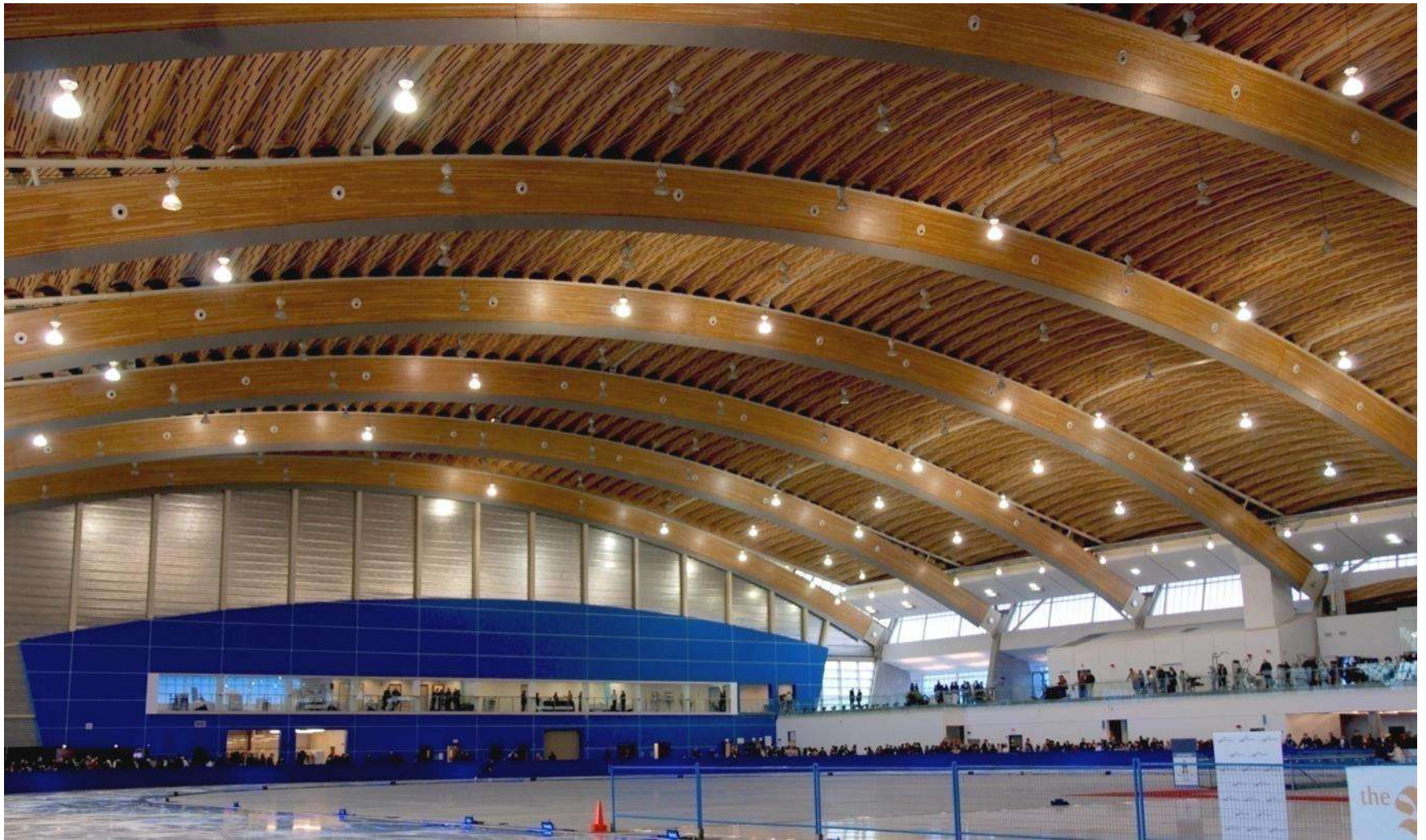
Expo 2010 – Vancouver Pavilion

上海2010世博会-温哥华展示馆

Shanghai, China 中国.上海

BUILDING GREEN WITH WOOD

木结构绿色建筑



Richmond Speed Skating Oval 里士满速滑椭圆场馆
Vancouver, British Columbia, Canada 加拿大.温哥华.卑诗省

BUILDING GREEN WITH WOOD

木结构绿色建筑



Whistler Public Library 惠斯勒公共图书馆
Whistler, British Columbia, Canada 加拿大, 卑诗省, 惠斯勒

3 现代木结构建筑--- 气候适应性



WFC--- Typical Prefabricated Housing Solution

现代木结构---典型装配式住宅



Prefabricated housing solution, building components can be manufactured in factory
装配式，构件工厂加工化程度高

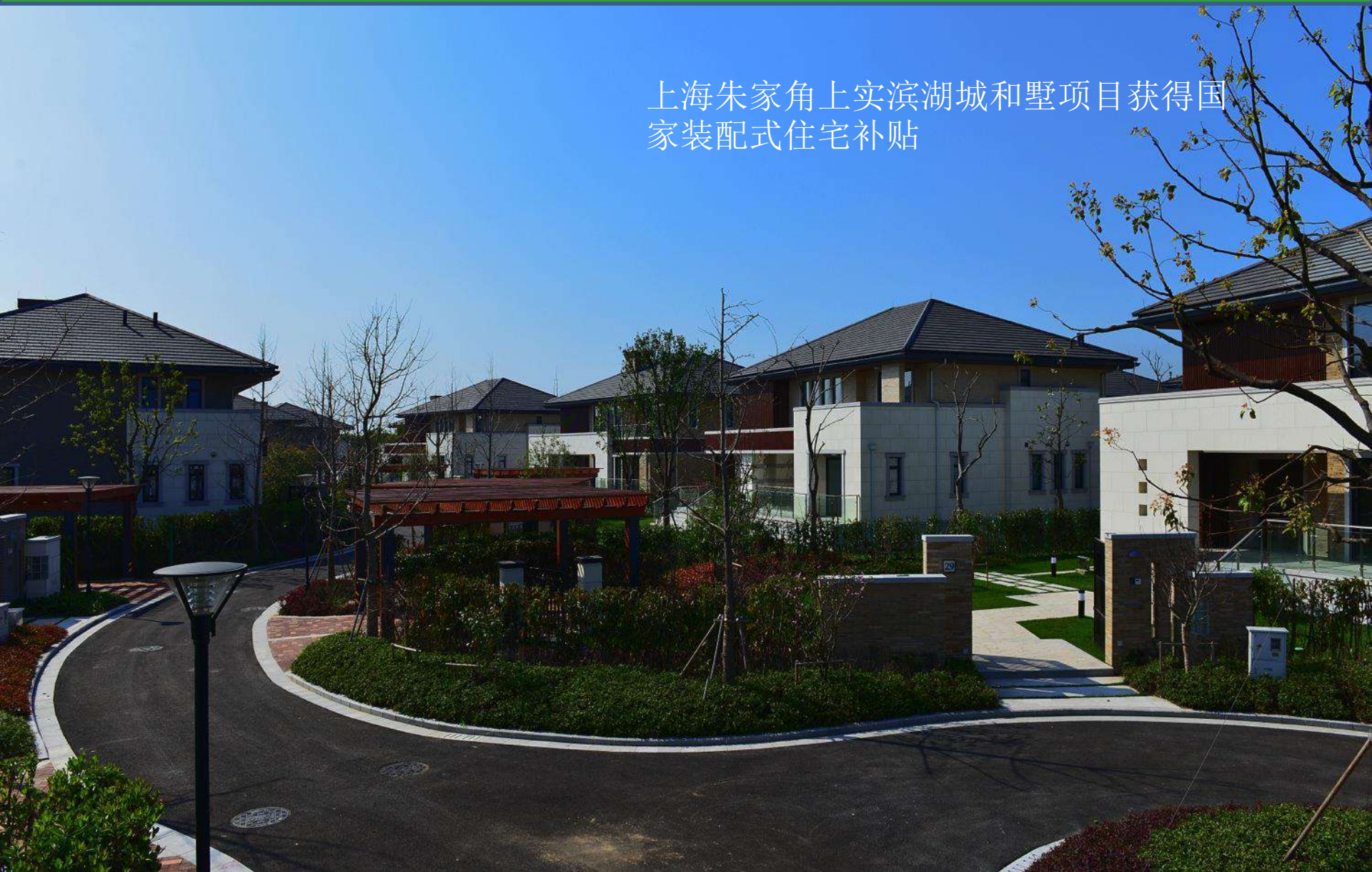
Less labor intensity
减少工人工作强度

Construction is not affected by low temperature
没有湿作业，可在冬季施工

WFC--- Typical Prefabricated Housing Solution

现代木结构---典型装配式住宅

上海朱家角上实滨湖城和墅项目获得国家装配式住宅补贴



Can be adaptable to various climate conditions

能够适应各种不同气候条件考验



Hainan R&F Mangrove Bay Villas

Can be built in humid and moist climate
能够适应热带潮湿闷热的气候环境

Specific measures are required to protect the building from insects and moisture.
通过对木材进行加工处理，对防虫和防潮进行特别设计施工

Can sustain extreme windy condition such as typhoon
能够抵挡极端强风如台风的侵袭

ENERGY EFFICIENCY OF WOOD FRAME BUILDINGS

木结构建筑的能源效率

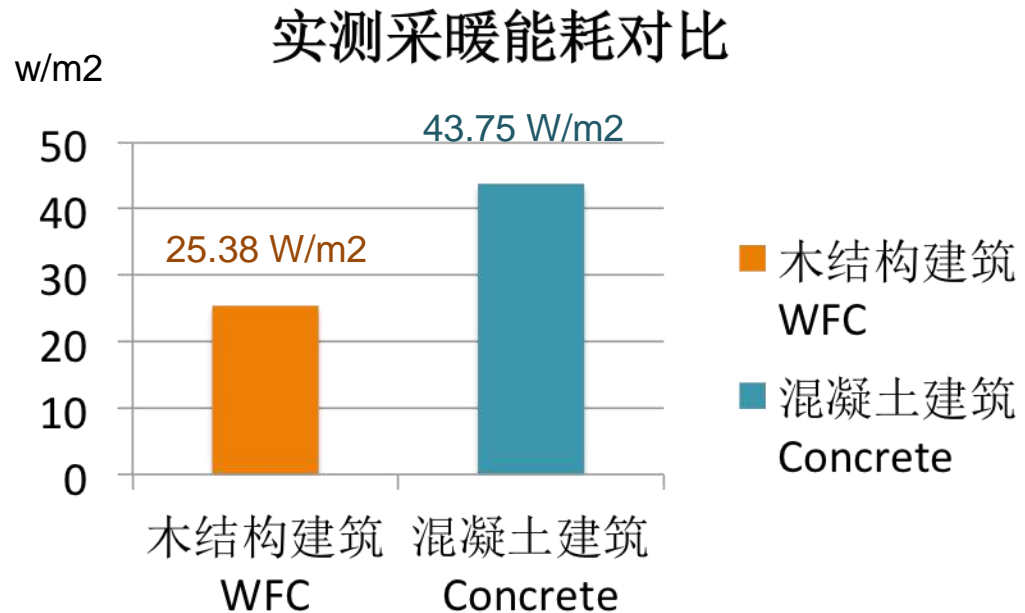
A joint research with Harbin Institute of Technology shows the energy consumption comparison between WFC and Concrete house during winter time. 与哈工大的一项联合研究表明了木结构建筑在冬季的采暖能耗要大大低于混凝土建筑



哈尔滨工业大学二校区内
轻型木结构住宅外观照片



哈尔滨呼兰区碧水山庄C6栋砖混
复合保温墙体结构住宅外观照片



实验时间：2008年冬季

完整实验报告可至加拿大木业协会网站下载

Test Period: Winter 2008

Full research report can be downloaded from www.canadawood.cn

A SUSTAINABLE BUILDING IS ONE THAT SURVIVES DISASTERS
可持续建筑,灾难中获得幸存

Kobe Earthquake, 1995
神戸地震,1995年



Undamaged buildings –
wood frame construction

未被破坏的木结构建筑

Damaged house – traditional
Japanese construction

被破坏的传统日式建筑

SEISMIC TESTING 抗震测试



Extensive testing worldwide of wood light-frame systems of all sizes – both in the lab and in real life – shows impressive seismic performance.

世界各地在实验室及现实生活中对轻型木结构系统进行抗震测试显示木结构抗震性能良好。

This photo taken at a research lab in Japan last summer is from a test of a 6-storey light frame building subjected to a major simulated earthquake.

去年夏天,在日本实验室对六层轻型木结构建筑进行模拟地震测试.(如左图所示)



Using Wood to Build Sustainable Future 筑木而居 永续未来

