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FOR ALL  
FOREVER**

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# FSC®-Certified Wood in Construction and Green Building

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# An American Institute of Architects (AIA) Continuing Education Program



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# Course description

- Forest Stewardship Council (FSC) certification has been a leading driver of global forest conservation since 1994, and the green building movement is a cornerstone of its success.
- The US Green Building Council's LEED rating system and the designers, specifiers and builders who apply LEED standards play a critical role, as doing so rewards and promotes forest conservation.
- Other FSC market drivers, such as Living Building Challenge, regional green building programs, and high volume purchasing by major retailers all work together to expand the marketplace and make finding FSC building products easier.
- Through this course, you will learn why FSC products are a crucial conservation tool, how they integrate with broader green building standards, and how to identify, procure and properly document them to earn credit in green building programs.

# Learning objectives

- Explain why FSC-certified building products are key to green buildings that benefit both building occupants and the environment, and why building professionals play an important role in promoting responsible forest management in North America and beyond.
- Describe what to look for in a leading forest certification system when specifying responsibly-sourced wood products, including potential contribution toward LEED and Living Building Challenge certification of a project.
- Review the rules for how FSC-certified wood works in the LEED green building rating system, clarify the differences between LEED 2009 standards and LEED v4 as it relates to FSC, and understand how FSC is credited in other leading green building programs in North America.
- Identify the tools, strategies and resources that building professionals can use to encourage market transformation and sustainability of the forest products industry, including both environmental benefits as well as benefits to the built environment for end users.

# Why build with FSC-certified products?

1

Forests are at risk – Here and around the world

2

FSC protects and restores forests

3

FSC is the world's most trusted forest management certification: it alone includes many essential safeguards

4

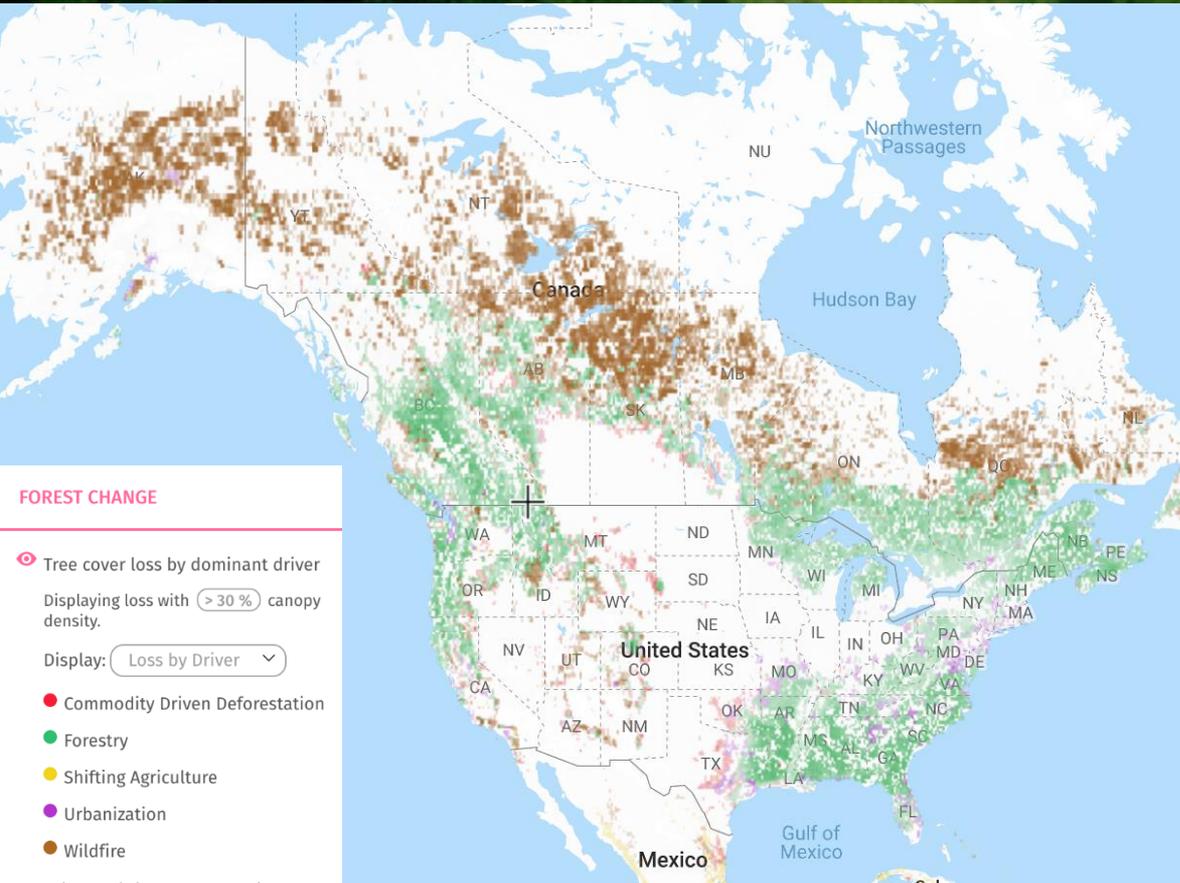
Use of FSC-certified wood helps address our most pressing environmental challenges

5

Wood is a renewable building material that can be sustainably produced from healthy ecosystems

**Let's look at these one at a time...**

# 1 Forests are at risk – here and around the world



From 2001-2015, North America lost more than 70 million hectares of tree cover. ([Source](#))

The greatest global causes of deforestation are agricultural development and urbanization. ([Source](#))

Illegally logged timber has an estimated value of as much as \$150 billion annually – as much as 30% of all trade! ([Source](#))

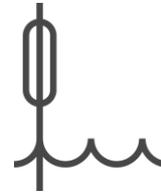
Global demand for wood is expected to triple by 2050. ([Source](#))

## 2 FSC protects and restores forests



**31%**

of Earth's land area is still forested, which is about 2/3 of the forested area that existed prior to industrialization.



Forests protect our soils, provide much of our fresh water, and regulate and stabilize our climate.



Nearly

**80%**

of the world's land-based species depend on forests for habitat.



**1.6B**

1/5 of the world's people depend on forests for their livelihoods.

## 3

# FSC is the world's most trusted forest certification: it alone includes essential safeguards

As leading conservation organizations will testify, FSC is the only forest certification worthy of their endorsement, ensuring that critical forest ecosystem values — and the workers and communities that depend upon them — are protected. FSC's success has given rise to other certification schemes, most of which tend to codify legal forestry or voluntary best management practices if they exist.

In the following slides, we address the below key attributes that clearly differentiate FSC:

1. Governed democratically
2. Prohibits deforestation
3. Requires forest growth to meet or exceed harvest
4. Protects rare old growth and high conservation values
5. Protects Rare, Threatened and Endangered Species
6. Limits clearcut size to protect forest ecology
7. Restricts use of highly hazardous pesticides
8. Protects Indigenous Peoples' rights
9. Requires stakeholder consultation on public and private lands
10. Certified claims are always tied to certified inputs



An open membership  
leads FSC

A landscape photograph showing a deforested area in the foreground with a snow-capped mountain in the background. The foreground is a grassy field with many tree stumps and scattered logs, indicating recent logging activity. In the background, a large, snow-capped mountain peak rises above a line of evergreen trees. The sky is clear and blue.

**FSC prohibits  
deforestation**

An aerial photograph of a forest landscape. A large, irregularly shaped area in the center-left is cleared, showing brown soil and scattered tree stumps. This clearcut area is surrounded by dense, green coniferous forest. The terrain is hilly, and a dirt road is visible winding through the forest on the left side. The overall scene illustrates the impact of logging on a forest ecosystem.

# FSC limits clearcut size to protect forest ecology



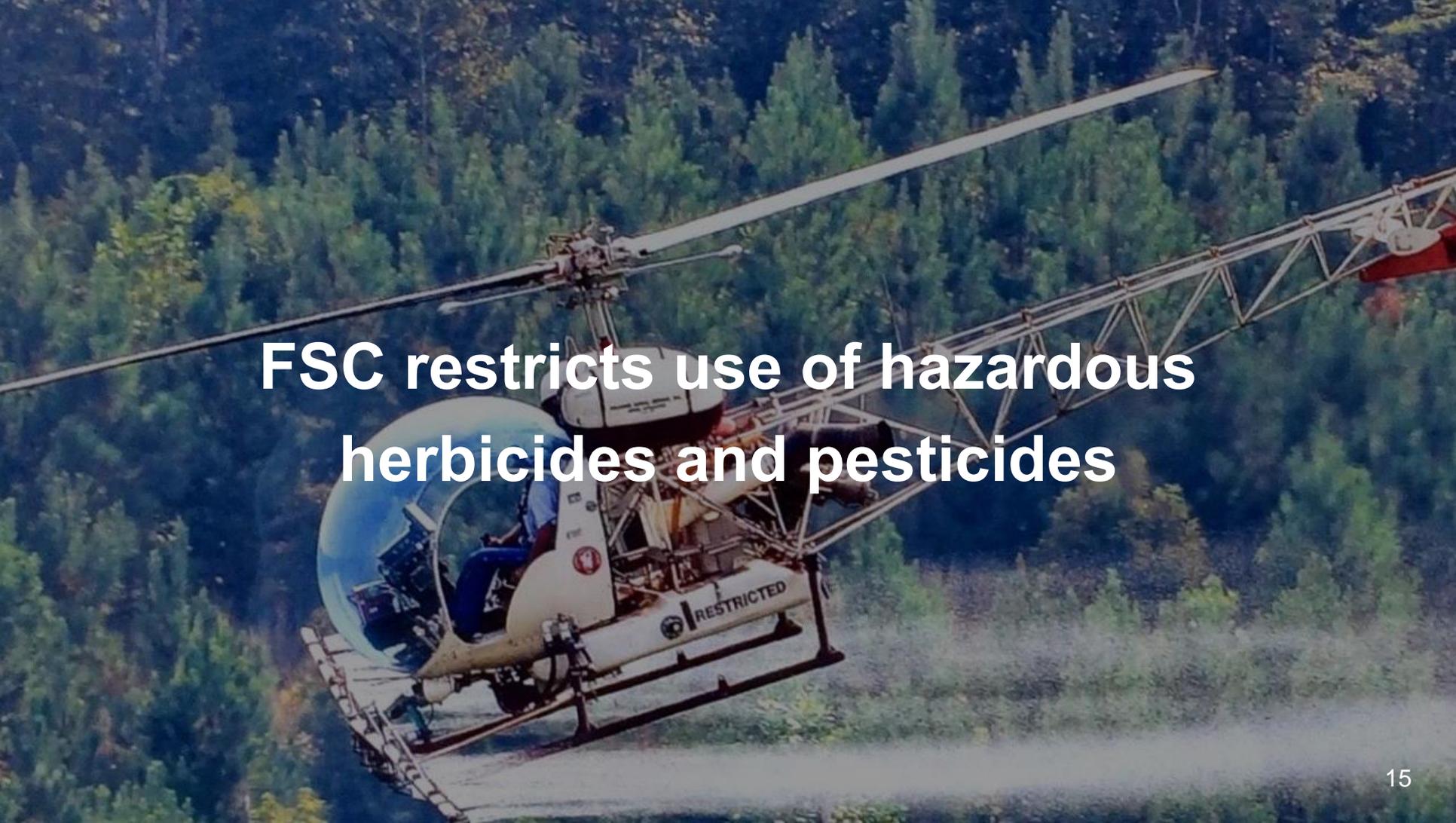
**FSC requires forest growth  
to meet or exceed harvest**



**FSC protects  
rare old growth**

A photograph of a deer with antlers standing in a forest clearing. The deer is facing right, and the background is a dense forest of evergreen trees. The lighting is bright, suggesting a sunny day. The text "FSC protects wildlife" is overlaid in white on the deer's body.

**FSC protects wildlife**

An aerial photograph of a helicopter in flight over a dense forest. The helicopter is tilted, and a large plume of white spray is being released from its rear, covering the ground below. The helicopter's main rotor blades are visible, and the word "RESTRICTED" is printed on the side of the fuselage. The background is a vast expanse of green trees.

**FSC restricts use of hazardous herbicides and pesticides**

A man in a dark jacket and cap is working on a large, curved wooden canoe in a workshop. The canoe is made of light-colored wood and is supported by a wooden stand. In the background, another person is visible, and the workshop has large windows overlooking a green landscape. The floor is covered in wood shavings. A table with tools is in the foreground on the right.

**FSC protects Indigenous Peoples' rights**



**FSC requires  
stakeholder engagement  
on private and public lands**

A close-up photograph of wood, showing the rough, textured bark on the left and the smooth, layered wood grain on the right. The lighting is warm, highlighting the natural textures and colors of the wood.

**FSC claims are always tied  
to certified inputs**

## 4

## Use of FSC-certified wood helps address our most pressing environmental challenges

1. FSC-certified forests always store more carbon than those managed using conventional practices. (Source: [Ecotrust](#))
2. FSC reduces forest degradation in certified areas. (Source: [WWF](#))
3. FSC has stronger measures to protect biodiversity and wildlife habitat than conventional forest practices. (Source: [WWF](#))
4. FSC certification leads to improved social outcomes (e.g., access to health care and safe drinking water) for forest workers.  
(Source: [CIFOR and WWF](#))

## 5 Forests are uniquely renewable



Wood is the only major renewable building material that can be produced on a sustained basis from natural ecosystems

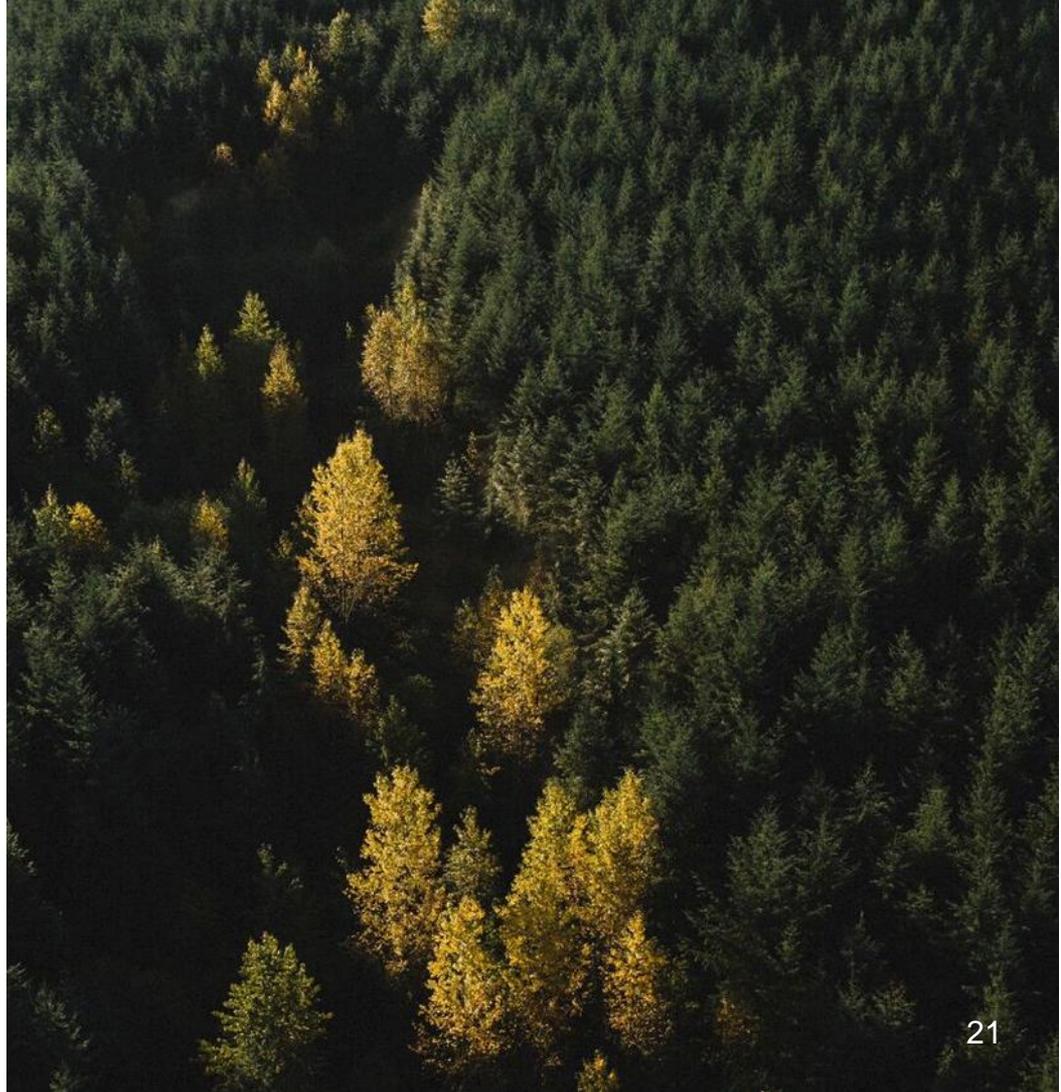
**US Environmental Protection Agency**

[www.epa.gov/oswer/docs/ghg\\_land\\_and\\_materials\\_management.mealybug.pdf](http://www.epa.gov/oswer/docs/ghg_land_and_materials_management.mealybug.pdf)

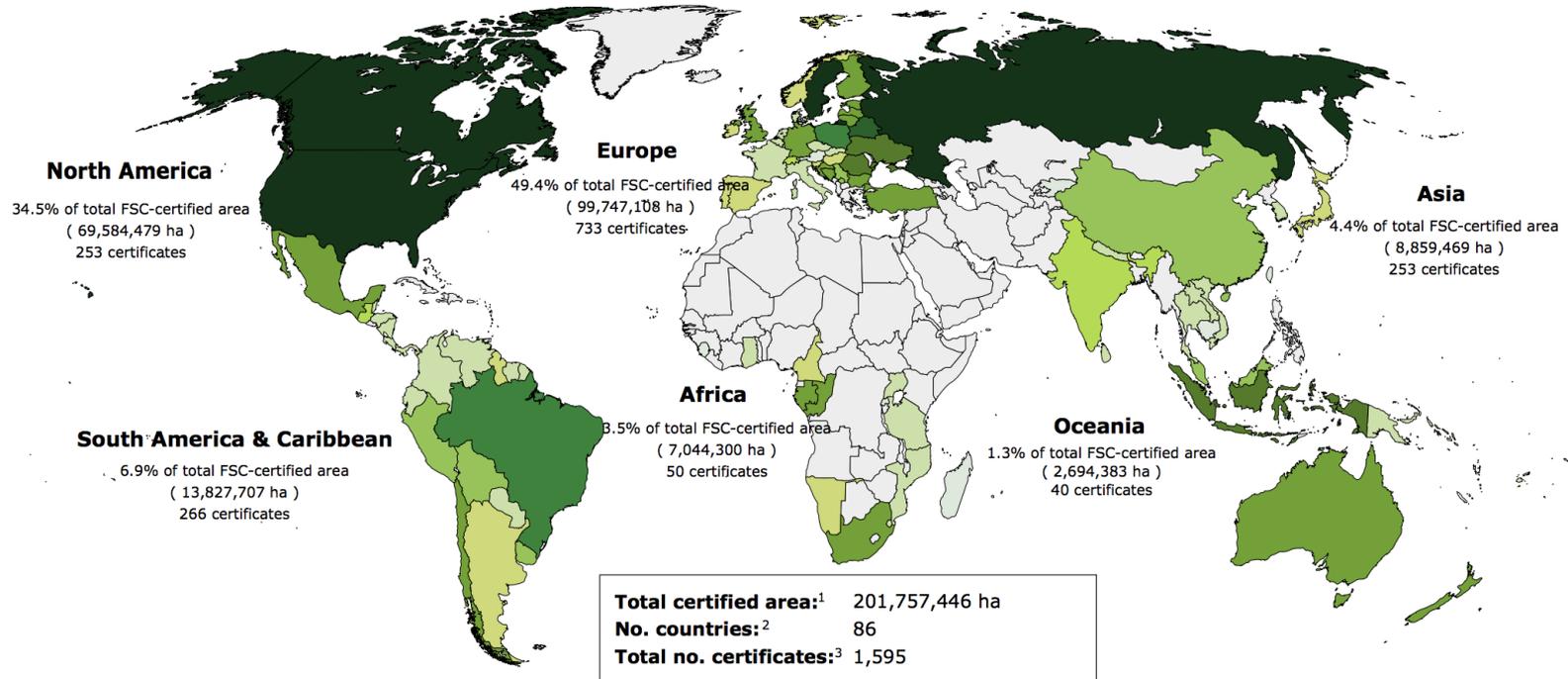
## In Summary

It's important to be a discerning wood buyer.

FSC-certified wood products uniquely contribute to protection and restoration of forests.



# FSC promotes responsible forest management on nearly than 500 million acres around the world

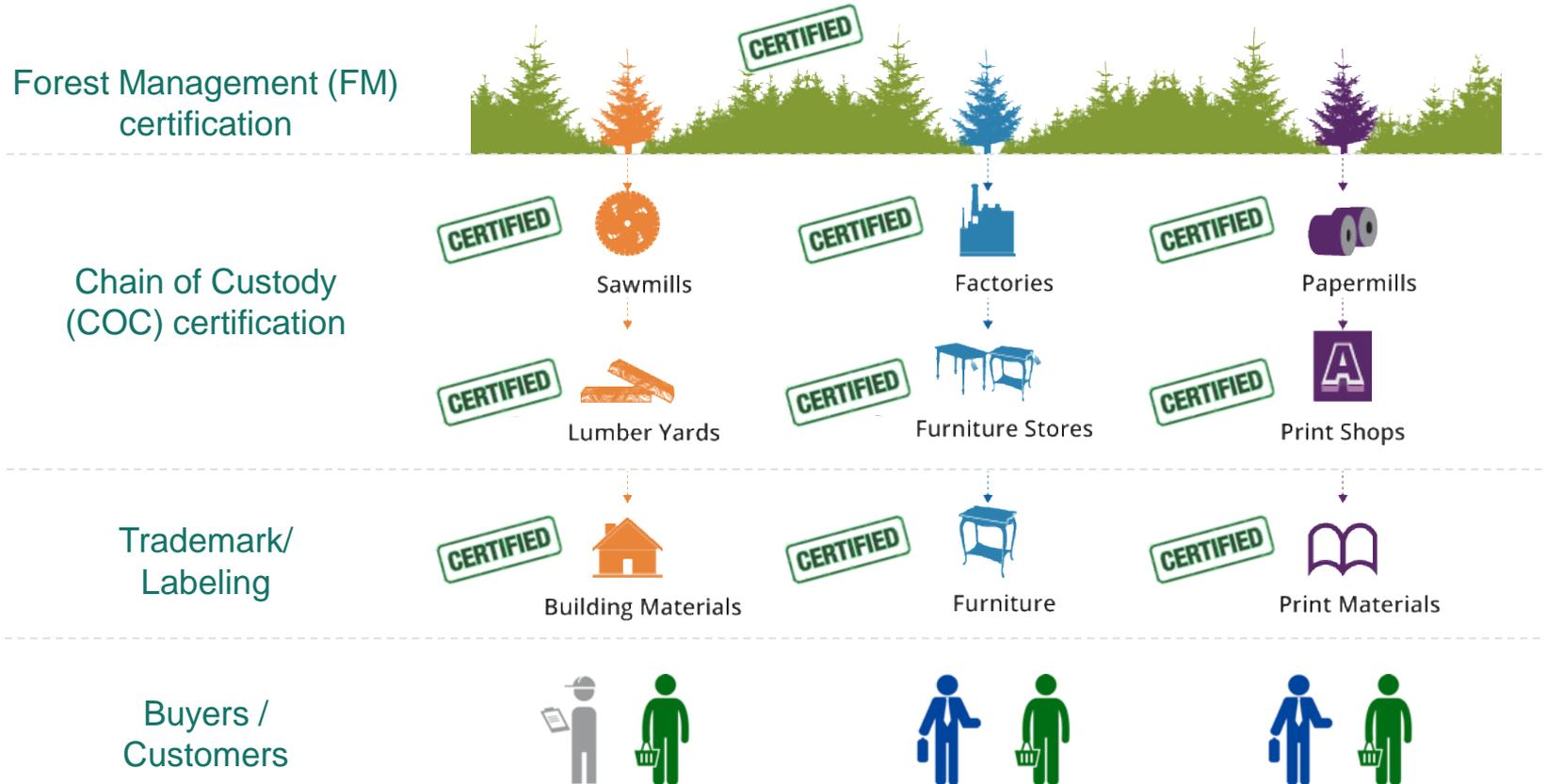


Total FSC-certified forest area in ha



Based on numbers from FSC International  
Created: 06.09.2018

# How FSC certification works



# Forest Management Certification

Forest Management (FM)  
certification



- \* Forest Management standards and certification are at the core of the FSC system.
- \* FSC forest management standards are grounded by globally consistent principles and criteria, and made locally relevant through the adaptation of conformance indicators.

# Chain of Custody Certification (CoC)

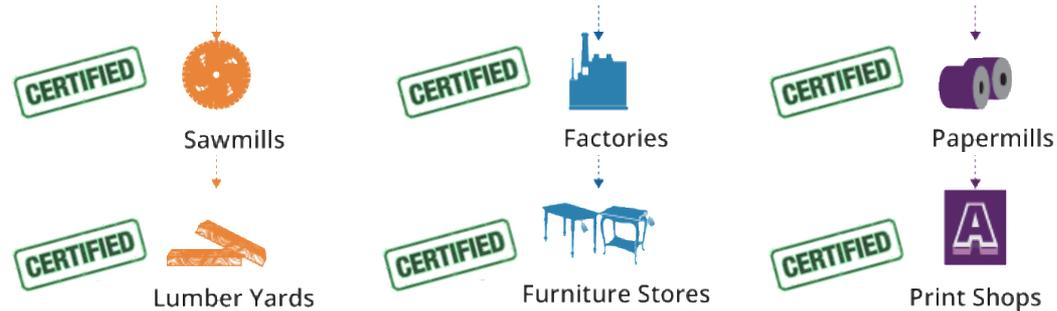
Chain of Custody  
(COC) certification



- \* Independent certification bodies conduct annual audits of CoC-certified companies to ensure the control of FSC-certified inventory and the validity of FSC-certified product claims.
- \* Construction project teams buying FSC-certified products should confirm that their direct suppliers are CoC certified by searching for the company on the FSC Certificate Database (<http://info.fsc.org/certificate.php>).

# Chain of Custody Certification (CoC)

Chain of Custody  
(COC) certification



- \* FSC requires CoC certification for all companies in the supply chain that take legal ownership of FSC-certified products and wish to make FSC invoice claims or use FSC trademarks in sales and promotions.
- \* If a single link in the supply chain between the forest and the end of the chain is not CoC certified, then the chain is broken and further FSC claims are not permitted.

# Certified companies $\neq$ certified products



- \* An CoC FSC certificate is a bit like a driver's license. It shows that the bearer knows how to drive, and has the right to drive, but it doesn't necessarily mean they are driving at any given point in time.
- \* In this same way, a company that is FSC-certified may or may not have FSC-certified products for sale at any given point in time.

# Look for the label on products

The FSC label offers one way to indicate to buyers that a product is FSC certified, but FSC does not require labeling of FSC certified wood products.



## FSC 100%

Products manufactured with 100 percent FSC-certified virgin fiber from FSC-certified forests



## FSC Recycled

Products manufactured with only recycled materials (both post-consumer and/or pre-consumer reclaimed materials)



## FSC MIX

Products manufactured with FSC-certified virgin fiber (from FSC-certified forests), **controlled sources** and/or recycled wood or fiber



...And the presence of an on-product FSC label is not sufficient to gain credit in LEED, so...

# How can you tell whether a product is FSC certified?

- \* Buy from FSC-certified suppliers.
- \* Tell the supplier you want FSC-certified products.
- \* **Ask for and ensure that FSC claims are made on the invoice.**

ABC Building Supply HF-COC-001388 HOUSE STREET CHICAGO, IL USA				<b>INVOICE</b>  INVOICE #INV014 DATE: MAY 1, 2014	
CONSIGNEE: WOOD CONSTRUCTION, LTD. GREGOR MENDEL ELM STREET MINNEAPOLIS, MN USA					
NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL AMOUNT (USD)	
876--5T	FSC 100% W6.1 DIMENSIONAL LUMBER, ACER RUBRUM	25	73.60	1840	
677--99	FSC MIX 70% W8.1 PLYWOOD, BETULA SPP	19	2165 MSF	1316.32	
100--9U	VENEER STRIPS	2000	0.80	1600	

  
\_\_\_\_\_  
Authorized Signature

THANK YOU FOR YOUR BUSINESS!

# Getting credit for using FSC

To get credit for using FSC-certified wood in your building project, invoices from suppliers must include the FSC claims for the certified products.

Company's FSC  
Certificate Code

<u>ABC Building Supply</u> <b>HF-COC-001388</b> HOUSE STREET CHICAGO, IL USA		<b>INVOICE</b>  INVOICE #INV014 DATE: MAY 1, 2014			
CONSIGNEE: WOOD CONSTRUCTION, LTD. GREGOR MENDEL ELM STREET MINNEAPOLIS, MN USA					
NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL AMOUNT (USD)	<b>Dollar Value</b>
876--5T	<b>FSC 100%</b> 6.1 DIMENSIONAL LUMBER, ACER RUBRUM	25	73.60	<b>1840</b>	
677--99	FSC MIX 70% W8.1 PLYWOOD, BETULA SPP	19	2165 MSF	1316.32	
100--9U	VENEER STRIPS	2000	0.80	1600	
 _____ Authorized Signature					
THANK YOU FOR YOUR BUSINESS!					

# FSC Claim Types

- \* FSC 100%
- \* FSC Mix [NN]%
- \* FSC Mix Credit
- \* FSC Recycled Credit or FSC Recycled [NN%]

Company's FSC  
Certificate Code

ABC Building Supply  
HF-COC-001388  
HOUSE STREET  
CHICAGO, IL  
USA

INVOICE

INVOICE #INV014  
DATE: MAY 1, 2014

CONSIGNEE:  
WOOD CONSTRUCTION, LTD.  
GREGOR MENDEL  
ELM STREET  
MINNEAPOLIS, MN  
USA

NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL AMOUNT (USD)
876--5T	<b>FSC Claim</b> FSC 100% W6.1 DIMENSIONAL LUMBER, ACER RUBRUM	25	73.60	1840
677--99	FSC MIX 70% W8.1 PLYWOOD, BETULA SPP	19	2165 MSF	1316.32
100--9U	VENEER STRIPS	2000	0.80	1600

  
Authorized Signature

THANK YOU FOR YOUR BUSINESS!

Dollar Value

# Other Green Building Systems

- \* **GLOBAL** Living Building Challenge
- \* **CALIFORNIA** Build It Green
- \* **OREGON** Earth Advantage
- \* **WASHINGTON** Built Green Program
- \* **ILLINOIS** Green Home Program
- \* **MINNESOTA** Buildings, Benchmarks and Beyond



# LEED 2009 Commercial Rating System

- \* The Certified Wood Credit (MRc7) offers a single point if at least 50% by cost of permanently installed wood products are FSC certified.



# LEED v4 Commercial Rating System

One of the two available points in the Building Product Disclosure & Optimization (BPDO): Sourcing of Raw Materials credit may be earned by using products that meet “leadership extraction practices” for at least 25%, by cost, of the total value of permanently installed building products in the project.

1

Under this option, FSC-certified wood is one of a few options that count toward the 25% threshold.

2

Other eligible products include recycled content, reused materials, and bio-based products meeting the Sustainable Agriculture Network standard.



**Local is preferred: Products whose eligible raw material components originated within 100 miles of the building project are valued at 200% of their cost.**



# LEED for Homes



# LEED-H program

- \* Projects can receive credit for using FSC-certified wood in the Materials and Resources credit 2.2, Environmentally Preferred Products.
- \* In seeking MR 2.2, a project receives 0.5 points for using FSC-certified wood for any of the following applications:
  - Flooring
  - Floor framing
  - Interior wall framing
  - Trim
  - Roof framing / sheathing
  - Floor sheathing
  - Wall sheathing
  - Exterior wall framing / structure
- \* Also, Materials and Resources credit 2.1 contains a prerequisite that all tropical wood used must be FSC certified.



# Documenting FSC use in LEED

Bullitt Center © John Stamets, 2013

Windfall Lumber



# Step 1: Use FSC-certified vendors

Ensure that eligible material purchases are from FSC-certified vendors.

- \* Who needs a Chain of Custody certificate?
- \* Who doesn't need a Chain of Custody certificate?
- \* Examples



# Step 2: Compile invoices for FSC products purchased

## Each invoice must conform to the following requirements:

- \* Each wood product must be identified by line item.
- \* FSC-certified products must be identified as such with their FSC claim by line item.
- \* Each line item must have a dollar value.
- \* The company's FSC certificate code must be included on any invoice that includes FSC-certified products.

Wood products that are identified on invoices as FSC 100% and FSC Mix Credit are valued at 100 percent of cost. Wood products identified as FSC Mix [NN]% are valued at the indicated percentage of their cost (e.g. a product identified as FSC Mix 75% is valued at 75 percent of the total cost).

Company's FSC  
Certificate Code

ABC Building Supply		<b>INVOICE</b>		
HF-COC-001388		INVOICE #INV014 DATE: MAY 1, 2014		
HOUSE STREET CHICAGO, IL USA				
CONSIGNEE: WOOD CONSTRUCTION, LTD. GREGOR MENDEL ELM STREET MINNEAPOLIS, MN USA				
NO.	DESCRIPTION	QTY	UNIT PRICE (USD)	TOTAL AMOUNT (USD)
876-5T	<b>FSC Claim</b> FSC 100% W6.1 DIMENSIONAL LUMBER, ACER RUBRUM	25	73.60	1840
677-99	FSC MIX 70% W8.1 PLYWOOD, BETULA SPP	19	2165 MSF	1316.32
100-9U	VENEER STRIPS	2000	0.80	1600

  
Authorized Signature

THANK YOU FOR YOUR BUSINESS!

Dollar  
Value

# Know which version of LEED you are working with

1

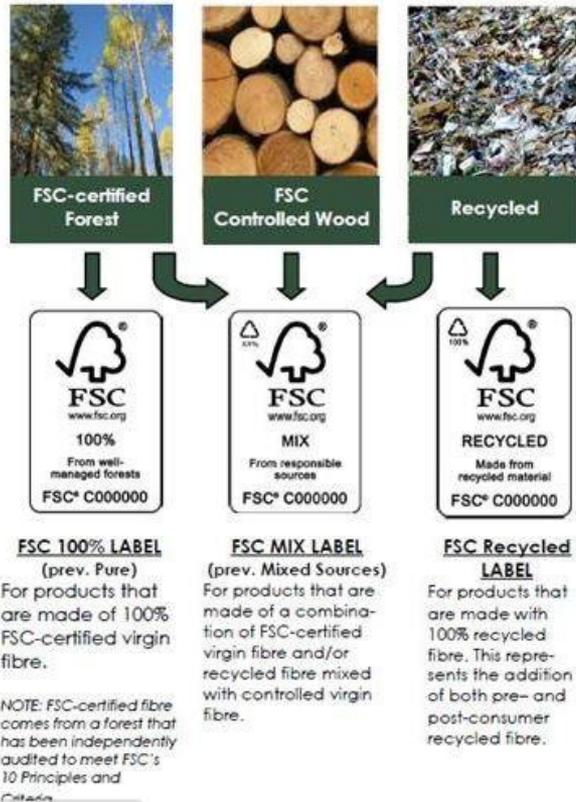
For **LEED 2009**: Invoices for all wood used must be compiled in order to calculate that at least 50% of the wood used is FSC certified.

2

For **LEED v4**: Only the invoices with FSC claims are required.

$$\text{Percent of FSC Certified Wood in Project} = \frac{\text{(Total Cost of FSC Wood in Project)}}{\text{(Total Cost of Wood in Project)}}$$

# FSC Mix and FSC Recycled in LEED



- \* Products identified as FSC Mix or FSC Mix using a percentage claim may contain pre- or post-consumer recycled materials, which are both eligible inputs into an FSC-certified product.
- \* Products identified as FSC Recycled do not count toward MRc7 under LEED 2009, but instead can contribute to MRc4. FSC Recycled products are treated as recycled under LEEDv4.
- \* Materials cannot be double-counted in LEED v4 or contribute simultaneously to the LEED 2009 MRc4 and MRc7 credits.

# LEED Documentation: Alternate process for woodworkers

Architectural woodworkers supplying FSC-certified inputs to LEED projects may choose to use a different documentation process (as opposed to an invoice) to contribute value to the credits.

**In choosing to work with this documentation process, woodworkers must:**

1

Be FSC Chain of Custody certified and list their FSC certificate code on the project invoice.

2

Install the custom products on the project site.

3

Provide a document that includes their total cost of FSC-certified wood used on the project as well as the total cost of wood materials.

# LEED Alternative Compliance Path (ACP) for Legal Wood

In April 2016, the US Green Building Council introduced a Pilot Alternative Compliance Path (ACP) for “Legal Wood” into LEED.

- The ACP (MRpc102) was “designed to help rid our buildings of illegal wood by promoting the use of wood that is verified to be legal.”
- It is designed to “test an approach to prerequisite requirements” for the LEED program.
- As a pilot, the ACP is not a permanent part of the LEED program. A USGBC member vote would likely be required to incorporate worthy components of the ACP.
- It is difficult to predict how architects can comply with the ACP as it is currently written, since it relies on an untested reference standard, ASTM 7612-10.
- **Leading conservation organizations strongly recommend ignoring the ACP.**
- Credit for use of FSC-certified products remains unchanged.

# FSC Project Certification



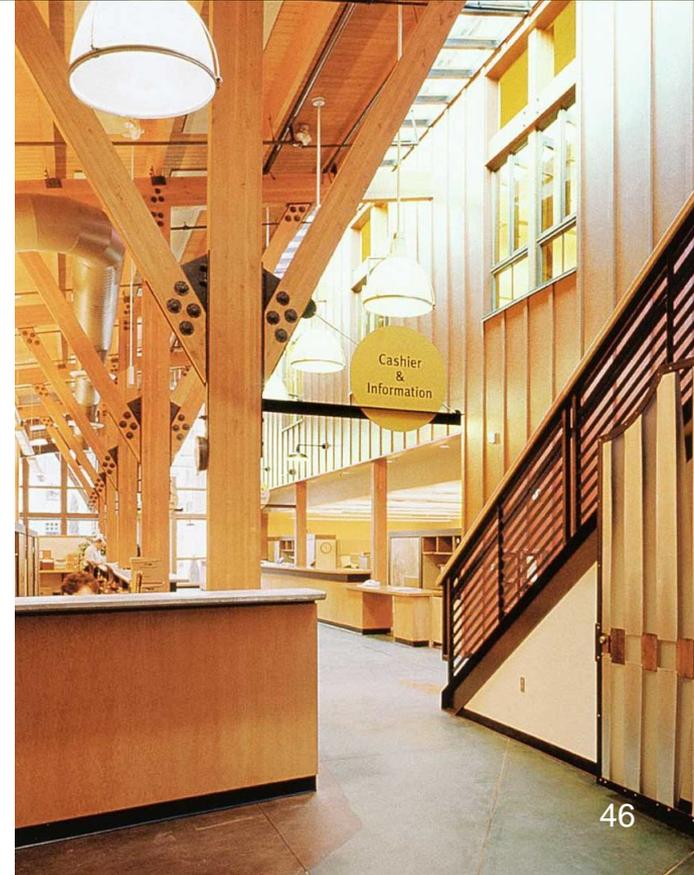
© Denmarsh Photography, Inc.



# What FSC Project Certification does

**Verifies that the wood in a building comes from responsible sources.**

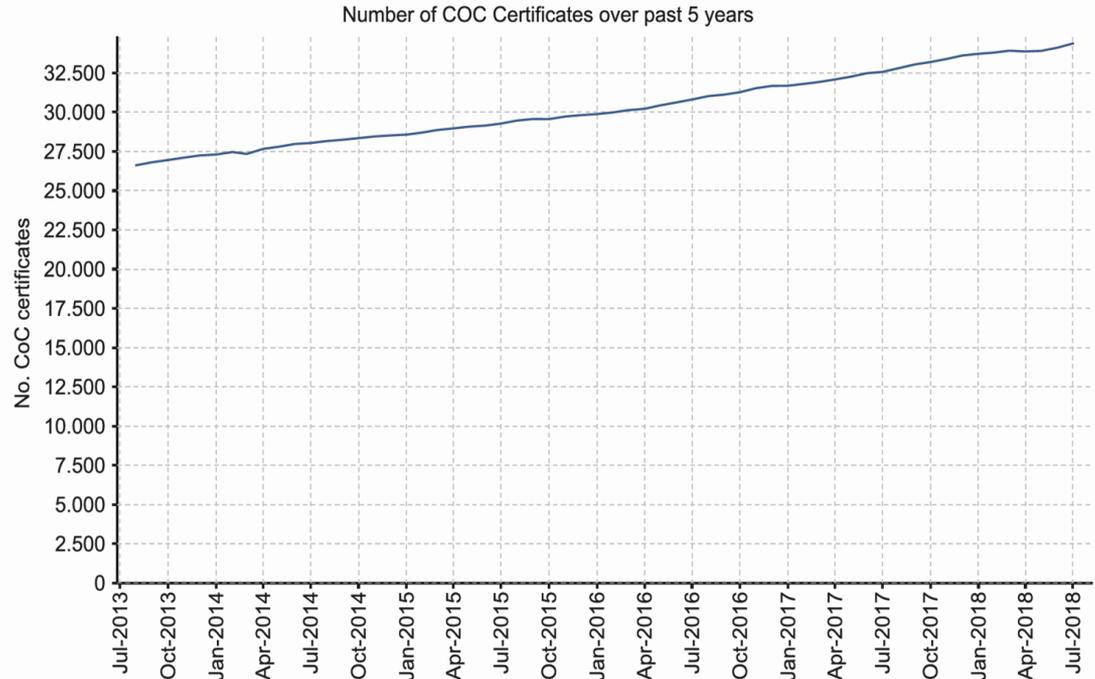
- \* Provides direct recognition of commitment to forest conservation.
- \* Can be used independently or as a complement to green building and other related certifications.
- \* Requires at least 50% of the wood to be FSC certified, with the remainder from “controlled” sources.
- \* Project Certification is also available for specific building components such as windows, cladding or framing.
- \* Audits are conducted by an FSC-accredited third-party certifier.



# Strategies, Tools and Resources to specify FSC

## Specifying and Sourcing FSC-Certified Wood

- \* Product availability has improved considerably in the past five years.
- \* A wide range of products are available today, and nearly all of these products are made from wood grown in the US and Canada.



# Some critical advice

- 1 Don't assume. Be clear with suppliers that you want FSC-certified wood!
- 2 Do your research.
- 3 Encourage suppliers to get certified.
- 4 Specify what is available.



# Use the Builder's Guide



[advocate.us.fsc.org/construction](https://advocate.us.fsc.org/construction)



## Build Greener With This Free Eco-Friendly Builder's Guide

Learn how easy it is to build sustainably with free information, resources, and a supplier list from Forest Stewardship Council.

[DOWNLOAD FREE GUIDE AND SUPPLIER LIST](#)

FSC-certified wood products help keep forests healthy for all, forever.

[BENEFITS](#) [SOURCING](#) [WHY FSC](#) [TOOLS](#)

# Contact Local Suppliers

Contact local wood product fabricators or distributors early in the design process and ask them what FSC-certified products are readily available.



# In Closing

- FSC-certified wood products are a “cut above” all others. Using FSC ensures that your wood came from forests uniquely managed to keep them intact and healthy - for all, forever. With FSC, your project gains the bona fides required to claim true climate and environmental benefits.
- FSC also remains the only recognized forest products certification standard for both LEED and the Living Building Challenge.
- FSC is easier to source than ever, and is often comparably priced or with reasonable premiums when compared with similar non-certified products.
- **Given all these factors, do right by forests every time - make FSC your default spec for all building projects!**



# Thank You

This concludes the American Institute of Architects Continuing Education Systems Course.

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