

# **Recommendations for Improvements in the Way that LEED Treats Wood and Other Bio-Based Materials**

## **Recommendation**

***Expand the points available under the Certified Wood Credit and incentivize the use of products with 100% certified content while eliminating the Rapidly Renewable Materials Credit***

***Prepared by:***

**Sierra Club**

**Forest Certification Committee**

***Submitted by:***

**Alliance for Credible Forest  
Certification**

10-14-09

Respectfully submitted to USGBC staff and the MR TAG by the Alliance for Credible Forest Certification and supporting organizations.

*Alliance for Credible Forest Certification member organizations:*

- ✓ Dogwood Alliance
- ✓ ForestEthics
- ✓ Greenpeace
- ✓ National Wildlife Federation
- ✓ Natural Resource Council of Maine
- ✓ Rainforest Action Network
- ✓ Sierra Club

*Also supporting this proposal:*

- ✓ Northwest Natural Resource Group

## **Recommendation**

Eliminate the Rapidly Renewable Materials credit and move the available point to the Certified Wood credit, using the increased available points to incentivize the use of products with 100% certified content.

## **Suggested Change**

Do away with the Rapidly Renewable Materials credit. Reward the use of bamboo and cork under the Certified Wood credit if (and only if) these materials are certified in accordance with a certification scheme that meets the forest certification benchmark. Reward the use of agricultural by-products – which are the “waste” of other agro-industrial processes – under the Recycled Content credit, as pre-consumer/post-industrial recycled content, as appropriate. Any products currently rewarded under the Rapidly Renewable Materials credit that do not fall into the categories above could be rewarded via an Innovation & Design Process credit.

Move the point that used to be in the Rapidly Renewable Materials credit to the Certified Wood credit. In LEEDv2009, there are currently 2 points available in the Certified Wood credit: 1 for using at least 50% certified wood (dollar value of permanently installed wood products), and an additional exemplary performance point for using 95% certified wood or more.

Given that wood is the only building material that is certified to any environmental and social standards in LEED, and given the vital role that forest conservation and proper forest management play in combating climate change, there should be more points available in the Certified Wood credit.

A possible tiered point structure is as follows:

- ✓ 1 point - at least 50% certified wood
- ✓ 2 points - at least 75% certified wood
- ✓ 3 points - at least 95% certified wood

In considering whether to increase the number of points available in the Certified Wood credit, we urge USGBC to also examine whether the minimum threshold for achieving a point under the Credit is correctly calibrated such that it is sufficiently high to drive market transformation while being achievable by most projects and types of projects that are committed to sourcing certified wood. For instance, we understand that most LEED projects that achieve the point currently are commercial projects that use wood products for interior finishes only, i.e. they do not use substantial quantities of wood in the building structure and envelope. If this is true, and we want to create an achievable threshold, then a more appropriate point structure might be as follows:

- ✓ 1 point - at least 40% certified wood
- ✓ 2 points - at least 65% certified wood
- ✓ 3 points - at least 85% certified wood

We ask USGBC to join us in researching which LEED projects and types of LEED projects achieve the certified wood point currently to help determine an appropriate threshold for minimum achievement of the credit.

There should also be incentives for using substantial amounts of products whose contents are 100% from certified forests, since these products better fill the intent of the Certified Wood credit than products that contain a mix of certified and non-certified content. There are two ways that we suggest to create such incentives:

The simplest way would be to more heavily weight the value of products with 100% certified content (“FSC Pure” under FSC). Such products could be subjected to a multiplier of 1.25 in calculating their dollar value.

Another way would be to establish an alternative compliance pathway to achieving the second or third points available in the modified credit (we recommend leaving the first point alone so as not to create an unintended incentive to use less certified wood overall). As a preliminary proposal, we suggest the following:

- ✓ 1 point - at least 50% certified wood

- ✓ 2 points - at least 75% certified wood (mixed and pure) OR at least 50% overall AND 25% pure
- ✓ 3 points - at least 95% certified wood (mixed and pure) OR at least 50% overall AND 40% pure

### **Rationale for the Elimination of the Rapidly Renewable Materials Credit**

The Rapidly Renewable Materials credit is a weak credit that has no standards for environmental or social performance other than “rapid renewability.” Fast growing does not necessarily equate to sustainable or even environmentally preferable. More important are a variety of factors including:

- *Sustained yield* – do rates of harvest exceed rates of growth, regardless of how high the latter may be?
- *Ecosystem impacts* – are monocultures of fast-growing plants being established at the expense of natural ecosystems?
- *Chemical use* - are monocultures of fast-growing plants reliant on the extensive use of harmful chemicals?
- *Social and community impacts* – do local communities benefit from fast-growing monocultures, or are they harmed?

Only credible certification systems that include regular auditing can provide satisfactory answers to these questions. FSC certification is now available for bamboo plantation management and for the harvest of cork bark from cork oaks. FSC certified bamboo and cork are now on the market.

One of the weaknesses of LEED is that it currently holds wood to high environmental and social standards, but standards for building materials other than wood are not held to similarly exacting standards. While the changes recommended here will not solve this problem across the board, it will at least reduce arbitrary discrimination among bio-based materials.

While agricultural by-products may not meet a strict definition of recycled content, they can be considered and defined as such by USGBC and it is preferable that they be treated in this fashion than maintain a weak credit to house them.

## **Rationale for Adding a Point to the Certified Wood Credit**

In the LEEDv2009 New Construction rating system, there are 35 points available in the Energy and Atmosphere section, while there are only 14 in the Materials and Resources section. Within the MR section, certified wood is also allocated less points than other types of products, such as recycled-content products and salvaged products, which can earn up to 2 regular points and an additional exemplary performance point. This is true even though recycled-content is self-reported by companies and is a single-attribute assessment while certified wood is third-party certified to a rigorous multi-attribute screening process that includes the consideration of both environmental and social impacts.

Compared to previous versions of LEED, LEEDv2009 represents a substantial relative 'devaluation' of the MR credits to the EA (and SS and WE) credits. The justification given for this reweighting is that "the changes increase the relative emphasis on the reduction of energy consumption and greenhouse gas emissions associated with building systems...[and] the embodied energy of materials..." Wood certified to high standards should be worth more in LEED given that it is both energy-efficient (it is a good insulator, it is energy-efficient to manufacture relative to non-renewable materials like metals and concrete, and it often, depending on harvesting methods and location of sources, has a low carbon-footprint relative to non-bio-based materials) and forests play a vital role in carbon sequestration and the regulation of global and regional climate.

Finally, adding another point under the Certified Wood credit will help mitigate potential unintended disincentives for the use of certified wood in the revised process for weighting certified wood proposed by USGBC.

In the document released for public comment that describes the USGBC Forest Certification Benchmark Conformance Process, there is a proposal for more heavily weighting products certified under forest certification systems that meet a majority of the benchmark "distinguishing credits," of which there are 32 in the current version. The following is proposed:

Percent of Credits	Number of Credits	Recognition in LEED (dollar credit granted)
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Documented	Documented	towards 50% threshold per dollar spent)
40%	13	0.5 : 1
50%	16	1 : 1
60%	20	1.5 : 1
80%	26	3 : 1

While this proposal has its merits, the major problem with it is that it could create an unintended disincentive for the use of wood that is certified under a forest certification system that meets the highest level of performance. Because products certified under this system are valued at 300% of their actual invoiced dollar value, it is now possible to earn the basic point available by using only about 18% of these products (1/3<sup>rd</sup> of 50%) in terms of their actual dollar value. And to earn a second point in the current framework, one would need to increase this to 32% (1/3<sup>rd</sup> of 95%) because the gap between 50% and 95% is substantial.

If there were a second point available at 75% and a third at 95%, then the gap between the minimum threshold and the additional points is much less. The additional points seem more likely to act as a “ladder “ that people will seek to climb by trying to source more of the products that are most valuable under the Credit. This in turn will best fulfill the intent of the Certified Wood Credit.

### **Rationale for Incentivizing the Use of Products whose Contents are 100% from Certified Forests**

#### **Background**

While they vary in terminology and detail, all forest certification systems have standards and procedures that allow the production and labeling of Mixed as well as Pure products. FSC is no exception. FSC Pure

products derive 100% of their content from forests or plantations that are 3<sup>rd</sup>-party certified to FSC standards.

On the other hand, FSC Mixed products are either made under a Percentage System and incorporate a fixed percentage of certified and non-certified wood or wood fiber, or certified and non-certified products are manufactured and/or distributed on a volume pass-through basis called a Credit System.

FSC places controls on the non-certified wood content that is allowed into FSC Mixed products so as to weed out “the worst of the worst.” This is called Controlled Wood.<sup>1</sup>

FSC rules also allow post-consumer recycled content, but products that contain recycled fiber but no wood from a certified forest bear a specific “FSC Recycled” label.

Under the Percentage System, a fixed percentage of the volume of a given product comes from certified forests. For example, under FSC, a hardwood panel with an MDF core and wood veneer on the face and back, where the core represents 94% of the finished product by volume and is 100% FSC and the veneers make up the remaining 6% and are

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<sup>1</sup> FSC Controlled Wood specifies that the following five origins must be **avoided**:

- 1) Illegally harvested wood
- 2) Wood harvested in violation of traditional and civil rights
- 3) Wood harvested in forests in which High Conservation Values (areas particularly worth of protection) are threatened through management activities
- 4) Wood harvested from conversion of natural forests
- 5) Wood harvested from areas where genetically modified trees are planted

It should be noted that the Controlled Wood requirements are themselves having far-reaching positive impacts on forests, and that forest certifications other than FSC only incorporate one of the five Controlled Wood criteria: legal harvest.



not certified but are from “controlled” sources, would be sold (invoiced) as “FSC Mixed 94%.”

The Credit System, on the other hand, operates on a “volume pass-through” of certified content. If 25% of the raw material inputs into a manufacturing process come from FSC certified forests and the remaining 75% come from “controlled” sources, then under FSC rules, up to 25% of the outputs can be sold as “FSC Mixed Credit” – even though the specific products that are sold as such may not be made from the certified inputs.<sup>2</sup>

### **Rationale for Suggested Change**

More heavily weighting Pure products in LEED projects will tend to increase demand for Pure products. In turn, increasing demand for Pure products will build the most direct market linkages from LEED projects to forests that are managed in an environmentally and socially responsible manner.

It makes sense to weight Mixed Credit products at 100% of their dollar value since they represent a pass-through of 100% of the certified wood volume in and out of production processes and distribution networks. However, because of the way Credit systems work, very large manufacturers or distributors may be able to accumulate sufficient credits in their accounts such that they can satisfy all of the demand for certified products stemming from the green building movement without increasing their supply of certified raw materials. Unless a way can be

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<sup>2</sup> To elaborate, the Credit System allows manufacturers to keep credit accounts in which they track the quantities of products that they are allowed to sell as Mixed Credit according to the amount of certified inputs that they use on an ongoing basis. If they do not sell FSC outputs for a given time period but they use FSC certified inputs, they accumulate unused credits in their account that can be applied to later production – even though that later production may use 100% Controlled Wood inputs. Distributors can also operate under the Credit System, building up credits on the basis of products that are purchased but not sold as FSC certified and only later applying them to Controlled Wood and selling it as “FSC Mixed Credit.”

found to reward the use of Pure products above and beyond Mixed Credit products, many manufacturers will have little incentive to produce Pure products, thus dampening market potential for certified raw materials.

While Mixed products are extremely valuable and important to reward under LEED,<sup>3</sup> the FSC Pure product label, like the LEED Platinum rating, represents the highest level of environmental performance and the widespread use of the FSC Pure products should be encouraged under LEED. The use of FSC Pure products best fulfills the intent of LEED's Certified Wood credit: to encourage exemplary environmentally and socially responsible forest management.

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<sup>3</sup> The option to produce Mixed products has been and continues to be vital to the development and functioning of FSC and their use contributes in important ways to responsible forest management. Mixed products allow manufacturers whose supply of raw materials from certified forests is limited the flexibility to develop products and/or production systems that compensate for those supply limitations and still produce certified products. For example, in practice, without credit systems, many manufacturers would have to go to considerable expense to track FSC Pure materials through their production processes, and incur additional expenses to maintain those FSC products in their inventory until such time that a viable order is received.

Without the flexibility to produce Mixed products under the Credit System, much certified raw material would fail to find its way through the value chain to the end user. Mixed products in general and the Credit System in particular have allowed numerous large manufacturers to participate in the FSC system who would not have otherwise been able to do so, and the resulting increase in demand for FSC fiber has doubtless driven increases in the overall acreage of FSC-certified forest. So, under no circumstances should the use of FSC Mixed products be discouraged under LEED.

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Improvements in the Way that  
LEED Treats Wood and Other  
Bio-Based Materials**

**Recommendation**

***Require use of legal wood in LEED  
projects***

***Prepared by:***

**Sierra Club**

**Forest Certification Committee**

***Submitted by:***

**Environmental Investigation Agency**

**Rainforest Action Network**

**Sierra Club**

09-02-09

Respectfully submitted to USGBC staff and the MR  
TAG by:

- ✓ Environmental Investigation Agency
- ✓ Rainforest Action Network
- ✓ Sierra Club
- ✓ Ebbetts Pass Forest Watch

## **Recommendation**

Create a new prerequisite for the Materials and Resources section of LEED that requires that all wood used in a LEED project be at low risk for illegal harvest. If the wood originates from a country where illegal logging is a significant risk, then it must be verified as legal. The U.S. and Canada are not countries where illegal logging is generally considered a significant risk, and U.S. and Canadian wood therefore satisfies the prerequisite (although, per the footnote below, legal does NOT equate to responsible).

## **Suggested Change**

Require that all wood used in all LEED projects be at low risk for being illegally harvested. If the wood originates from a country where illegal logging is a high risk, then it must be verified as legally harvested. The U.S. and Canada are not countries where illegal logging is generally considered a significant risk, and U.S. and Canadian wood therefore satisfies the prerequisite (although, per the footnote below, legal does NOT equate to responsible).

Use the Global Forest Risk map at <http://globalforestrisk.nepcon.net/> to determine whether a country is low or high risk (the latter is “unspecified risk” in the terms of the risk map).

If the wood comes from a country that is identified as high risk, then accept any of the following as sufficient proof of legal harvest:

- Product is certified in accordance with the rules of FSC
- Product has been audited for Verified Legal Origin by a credible legality verification organization
  - A suggested reference standard for identifying credible legality verification programs is that established by the National Wood Flooring Association’s Responsible Procurement Program for Hardwood (RPPH)

## **Background**

It is axiomatic that illegally-harvested wood does not belong in a LEED project. This is doubly true given USGBC’s stepped-up commitment to building practices that combat global warming: recent studies confirm

that deforestation is one of the major contributors of global greenhouse gas emissions, and illegal logging is one of the causes of deforestation.

While some illegal logging does occur in the U.S. and Canada, most studies of the subject have concluded that the rate of illegal logging as an overall percentage of forest products produced here in North America is quite low, and the risk of illegal logging in the U.S. and Canada is therefore generally considered to be low.<sup>4</sup>

This is not the case in places like Indonesia, the Russian Far East, Burma, the Amazon, and the Congo Basin, where illegal logging is rampant. Illegally-harvested wood is sometimes consumed in the country of origin, but it is often “laundered” through international trade and manufacturing and imported into Europe and North America in value-added products like lumber, decking, flooring, plywood, and furniture, among other products. The U.S. International Trade Commission has estimated that as much as 30% of hardwood products imported into the U.S. are from suspicious or illegal sources.

<http://www.washingtonpost.com/wp-dyn/content/article/2007/03/31/AR2007033101287.html>

<http://www.dovetailinc.org/reports/pdf/DovetailTimber0507in.pdf>

<http://www.eia-global.org/PDF/report--NQA--forests--oct08.pdf>

It is widely recognized that illegal logging plays a contributing role in deforestation in the tropics and elsewhere (see, for instance, <http://www.ru.org/32defore.html>). Illegal logging is often the first in a

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<sup>4</sup> ***It is very important to note that, just because most logging that occurs in the U.S. and Canada is legal, this does NOT mean that most of the forest practices in North America are environmentally and socially responsible and worthy of recognition by the LEED Certified Wood Credit. Status quo industrial forestry as practiced by much of the mainstream timber industry in North America has numerous harmful environmental and social impacts, including but not limited destruction of high-conservation value forest, loss of wildlife habitat, conversion of natural forests to monocultures, damage to soil and water quality, etc.***

chain of tragic events whose end result is total deforestation. This is because loggers are often the first to build roads into previously inaccessible areas of primary forest and, in removing most of the commercially valuable timber, devalue the resource they leave behind. The roads they leave behind also provide access to others, who then are more likely to slash and burn the remaining forest for agriculture, starting along the roadside and gradually penetrating deeper into the forest frontier.

A report published by the Global Canopy Programme (GCP), an alliance of leading rainforest scientists based in the UK, concludes that the burning of tropical forests is second only to the energy sector as a source of greenhouse gases and far outstrips emissions from planes, cars, and factories. Figures from the GCP show that deforestation (largely due to slash and burn clearing for agriculture) accounts for up to 25 per cent of global emissions of greenhouse gases, while transport and industry account for 14 per cent each.

According to an article in UK's *The Independent*:

“Scientists say one days’ deforestation is equivalent to the carbon footprint of eight million people flying [from the UK] to New York. Reducing those catastrophic emissions can be achieved most quickly and cheaply by halting the destruction in Brazil, Indonesia, the Congo and elsewhere...No new technology is needed, says the GCP, *just the political will and a system of enforcement and incentives that makes the trees worth more to governments and individuals standing than felled.*”  
[emphasis ours]

### **Rationale for Suggested Change**

A new LEED Materials and Resources prerequisite requiring verification of legality for all wood used in LEED projects that comes from countries where illegal logging is a significant risk would help address the critical problem of illegal logging -- a contributing factor to deforestation, which in turn accounts for up to 25% of global emissions of greenhouse gases.

Recent amendments to the Lacey Act make it a crime to import and trade illegally-harvested wood and wood products in the U.S. The Lacey Act establishes strong incentives for companies to ask the right questions about their wood sources. USGBC should reinforce this trend.

The Lacey Act is already leading to a systemic shift in the practices of retailers, importers, manufacturers and logging companies. Companies and governments have expressed support of the U.S.'s new ban on trade in illegally sourced plants and plant products and many companies have already demonstrated their ability to comply. Simultaneously, a mechanism can and should be put in place to prevent illegally-harvested wood from being used in LEED projects. It's not just the right thing to do, it's the law.

Ironically, it is currently theoretically possible that a LEED project today could achieve the Certified Wood credit, whose intent is to promote responsible forestry, by using 51% FSC-certified wood and 49% uncertified illegally-harvested wood linked to the degradation or destruction of forests overseas. Illegal wood has no place in LEED projects, and USGBC should erect practical and cost-effective barriers to its inadvertent use. We believe a new prerequisite along the lines of the one described here accomplishes these objectives.