

Lignor has REDD credentials too

To reduce the global effects of climate change the United Nations has developed REDD (Reducing emissions from Deforestation and Degradation). The United Nations describes the aim of REDD is to “create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. This includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.”¹ Predicted financial flows from REDD are estimated to be US\$30billion per year.

Lignor’s patent pending/granted Eucalyptus Engineered Strand Lumber (ESL[®]) is for uni-directional strength, eg. beams which can challenge the designs using steel. Eucalyptus Engineered Strand Board (ESB[®]) is for bi-directional strength. Both Lignor ESL[®] and ESB[®] provide an alternative to using illegally harvested tropical rainforest timbers. Lignor ESL[®] and ESB[®] are Engineered Wood Products (EWPs) produced from hardwood timbers that have been harvested sustainably, ethically and legally. Lignor ESL[®] and ESB[®] are considerably stronger than other EWPs and when used together their design can challenge the strength of designs using steel and concrete.



Lignor
Green and REDD™



Ending illegal logging helps global climate change

Finding solutions to the problem of global climate change must include striving to end illegal logging in the world's tropical rainforests. This requires commitment from individuals, businesses and governments to replace the use of tropical rainforest timber products with timber products that are sourced from sustainable, legal and ethically harvested forests.

On 22 May 2008, the US led the way with Congress passing a groundbreaking law banning commerce in illegally sourced plants and their products, including timber and wood products. The new law is an amendment to a 100-year-old statute, named the Lacey Act after the Congressman.

On 17 June 2010, the BBC reported "The EU is set to finally ban illegal timber in 2012 after protracted legal wrangling over the issue. After two years of negotiations, legislators reached a compromise on a deal that will require companies to trace where their timber was harvested. Up to 40% of the world's wood production is estimated to come from illegally logged tropical forests."³

It is hoped other developed countries will follow suit, because if illegal timber traders are deprived of an end market, their activities will decrease. Recent advances in DNA barcoding and tracking⁴ through an alliance between University of Adelaide and Double Helix Tracking Technologies (DHTT) have introduced DNA tests to verify the origins of the wood⁵.

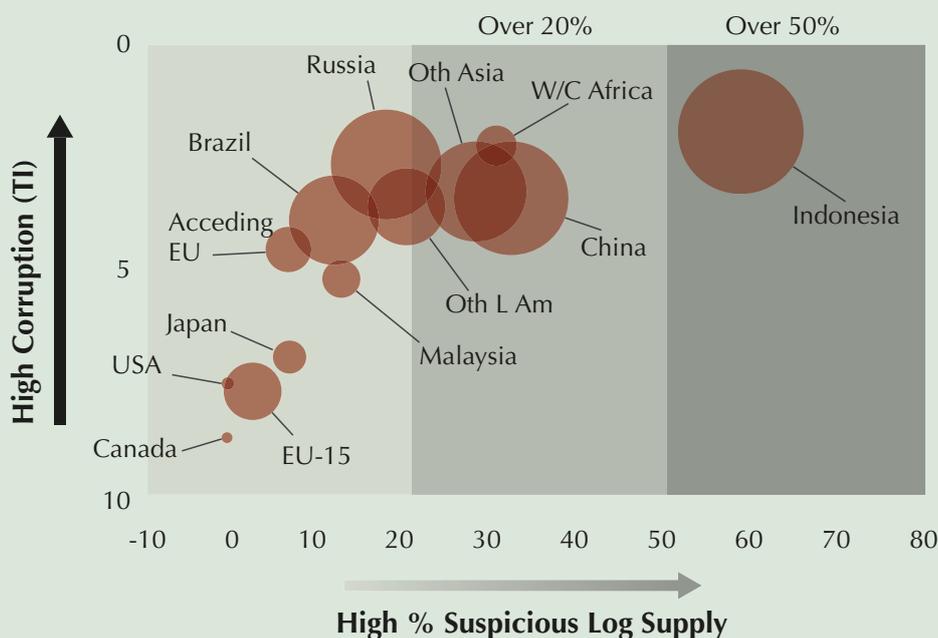
Illegal logging explained

"Preventing deforestation is potentially one of the simplest ways to reduce global emissions. At the moment, carbon emissions from deforestation account for some 18% of global greenhouse-gas emissions, more than all the world's trains, cars, lorries, aeroplanes and ships combined. Reducing deforestation and land-degradation will be vital if temperature increases are to be kept to within safe levels (generally assumed to mean no more than about a 2°C increase). Some argue it would be a quicker and cheaper way of reducing emissions than many alternatives, such as weaning the world's vehicle fleet off fossil fuels, forcing people to cut back on energy use or switching to low-carbon forms of power generation, such as wind farms and nuclear power"

The Economist, 24 September 2009⁶

Illegal logging impacts on the global climate and the livelihoods of 90% of the 1.2 billion people who rely on trees for a living⁷. The World Bank estimates the illegal timber trade is valued at US\$10billion, which directly undermines any nation's attempt to achieve sustainable economic growth, social equity, and environmental conservation⁸. The UN and Interpol are trying to track illegal logging as it is a portal for illegal funds transfer.

Chart: Corruption and suspicious log supply²



Note: In a range from 0 to 10, higher numbers indicate a perception as less corrupt
 Source: Seneca Creek Associates/Wood Resources International, 2004, p.8

Note: In a range from 0 to 10, higher numbers indicate a perception as less corrupt.

Lignor supporting Green and REDD™ aims

Lignor EWPs have been designed to excel in many aspects of environmental sustainability and commercial viability.

The development of Lignor ESL® and ESB® has been collaborative project between Lignor Ltd as the holder of the intellectual property working with local bodies such as, local blue gum growers, the Great Southern Development Corporation in Western Australia, the Western Australian State Government through Financial Assistance Agreement of approx A\$8.6million, a supply agreement with the WA Forest Products Commission (FPC), Advanced Timber Concepts Research Centre Faculty of Architecture, Landscape and Visual Arts at the UWA , AusIndustry and other organizations across the world. Lignor has been able to attract this level of collaboration because of the synergies inherent within Lignor's sound environmental and business credentials.

Lignor ESL® and ESB® deliver environmental advantages

- Industry sources estimate very significant forest areas are cleared each year, eg. the size of Belgium, to satisfy the industrial flooring market. However, *"accurate data on the scope of illegal forest activities is not available"*⁹.
- The carbon stored in Lignor ESL® and ESB® is greater than in other engineered wood products by up to 180%¹⁰.
- Lignor ESL® and ESB® are superior and sustainable substitutes for tropical hardwoods, thus a powerful aid to fight global deforestation.
- Both Lignor ESL® and ESB® are a significant method of sequestering large amounts of carbon for long periods of time (decades)¹¹.
- Lignor ESL® and ESB® have lower embodied energy than other building materials such as steel, aluminum, bricks and softwood EWPs¹².



Lignor creates business opportunities

Some of the business opportunities that Lignor can provide are:

- Australia will become a leader in this technology, with its intellectual property and its patents granted/pending and internationally registered trademarks.
- Using hardwood Eucalyptus for ESL® and ESB® increases the value of the wood around 600% as a replacement for woodchips (A\$1billion/year industry)¹³.
- Lignor ESL® and ESB® have the potential to deliver carbon credit opportunities to global hardwood Eucalyptus plantation owners.
- Create new global opportunities for regional farmers/businesses with the growing of hardwood Eucalyptus plantations with a ready market.

Other benefits include:

- Lignor ESL® and ESB® can be used as a replacement for steel, bricks and concrete in many building applications creating a much more carbon friendly building.
- Currently, using conventional products, the construction and management of buildings in the US and UK is responsible for just short of half those countries CO₂ emissions¹⁴.
- Lignor ESL® and ESB® products are termite, fungal and water resistant using a non toxic treatment.
- Lignor ESL® and ESB® are fire retardant with the addition of a non-hazardous chemical.
- Lignor ESL® and ESB® are more stable than bricks and concrete in events such as earthquake, and presents a new opportunity with Structural Integrated Panels (SIPs) and I-beams.



Environmental matters

By using EWPs such as ESL® (ESB®) wherever possible in house construction, an average of 25 tonnes of CO₂ emissions could be reportedly saved per house¹⁵.

Thus, just in one house, this saving in CO₂ emissions is similar to that obtained by an average driver of a Toyota hybrid Prius driving for 25 years¹⁶.

References

1. <http://www.un-redd.org/aboutredd/tabid/582/language/en-US/Default.aspx>
2. Seneca Creek & Associates. Wood Resources International. 2004 p.8.
3. BBC 17 June 2010 EU set to ban illegal timber from 2012.
4. www.adelaide.edu.au/environment/acebb/projects/plant4.html
5. <http://www.triplepundit.com/2009/11/double-helix-tracking-technologies-uses-dna-to-track-timber-fight-illegal-logging/>
6. The Economist 25 September 2009. Paying to save trees: Last gasp for the forest.
7. The Economist, 17 December 2009. Touch Wood. As quoted by Gordon Brown (former British Prime Minister).
8. <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/EXTFORESTS/0,,contentMDK:20636547~menuPK:1605862~pagePK:148956~piPK:216618~theSitePK:985785,00.html>
9. www.fao.org/forestry/law/en/
10. URS Report; Emission benefits associated with Lignor's products. 7 May 2007.
11. Ibid.
12. Ibid.
13. Australian Bureau of Agricultural and Resource Economics 2008; Australian forest and wood products statistics.
14. Edward Mazria, Architecture 2030, Andrew Waugh et al.
15. URS Report; Emission benefits associated with Lignor's products. 7 May 2007.
16. Australian Financial Review, Toyota Prius full page advertisement, 14 May 2007.

Lignor ESL® and ESB® are excellent building alternatives

For the European and American legislation and REDD to be successful, we require a committed coordinated international approach which importantly provides viable legal, ethical and sustainable timber alternatives for timber users on a global scale.

Lignor ESL® and ESB® are eucalyptus engineered wood products (EWPs) that can provide this alternative and replace global reliance on illegally harvested tropical hardwood timbers.

Lignor ESL® and ESB® are premium EWPs, produced from Australian Eucalyptus plantation and managed forests. These timbers have been certified as being legally, sustainably and ethically sourced by the Forest Stewardship Council (FSC) and the Australian Forest Certification Scheme (AFCS), which has mutual recognition by the Programme for the Endorsement of Forest Certification Scheme (PFCS). AFCS complies with the Australian Standards AS 4708 & AS 4707.